California Regional Water Quality Control Board

San Francisco Bay Region

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ORDER NO. R2-2006-0055
NPDES NO. CA0038008

The following Discharger is authorized to discharge in accordance with conditions set forth in this Order:

Discharger	City of Livermore Livermore-Amador Valley Water Management Agency (LAVWMA) East Bay Dischargers Authority (EBDA)
Names of Facilities	City of Livermore Water Reclamation Plant and its collection system
Facility Address	101 W. Jack London Blvd. Livermore, CA 94551 Alameda County

The Discharger (EBDA) is authorized to discharge from the following discharge point as set forth below:

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	POTW Effluent	37°, 41', 40" N	122 °, 17', 42" W	Lower San Francisco Bay

This Order was adopted by the Regional Water Board on:	**August 9, 2006**
This Order shall become effective on:	**October 1, 2006**
This Order shall expire on:	**September 30, 2011**
The U.S. Environmental Protection Agency (U.S. EPA) and the Regional Water Board have classified this discharge as a major discharge.	
The Discharger shall file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations not later than 180 days in advance of the Order expiration date as application for issuance of new waste discharge requirements.	

IT IS HEREBY ORDERED, that Order Nos. 00-089 and 01-059 (to the extent this general pretreatment permit applies to this Discharger) are rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA), and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

I, Bruce H. Wolfe, Executive Officer, do hereby certify the following is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on **August 9, 2006**.

Bruce H. Wolfe, Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
REGION 2, SAN FRANCISCO BAY REGION

ORDER NO. R2-2006-0055
NPDES NO. CA0038008

TABLE OF CONTENTS

TABLES

I. FACILITY INFORMATION

The following Discharger is authorized to discharge in accordance with the conditions set forth in this Order:

Table 1. Facility Information

Discharger	City of Livermore LAVWMA EBDA				
Names of Facilities	City of Livermore Water Reclamation Plant and its collection system				
Facility Address	101 W. Jack London Blvd. Livermore, CA 94551 Alameda County				
Facility Contact, Title, and Phone	Darren Greenwood, Water Resources Manager, (925) 960-8100				
Mailing Address	Same as Facility Address				
Type of Facility	POTW				
Facility Design Flow [1]		Actual 2004 (June, July & Aug.) ADWF	Existing Treatment Capacity ADWF[2]	Proposed Treatment Capacity	
	ADWF	5.63	8.5	11.1	
	Peak WWF[2]		12.4	12.4	

Footnotes for Table 1:

(1) Flows in million gallons per day, MGD; ADWF = average dry weather flow, WWF = wet weather flow

(2) Wet Weather Flow (WWF). Livermore has 12.4 MGD contractual peak wet weather capacity to convey treated wastewater to the LAVWMA storage and pumping facilities. The maximum LAVWMA flow to the EBDA system, under an EBDA/LAVWMA agreement is 41.2 MGD, including Zone 7 groundwater reverse osmosis reject flow, if capacity is available. During peak EBDA WWF, only 19.72 MGD capacity is available to LAVWMA in the EBDA system. If EBDA system capacity is not available due to peak WWF, LAVWMA is authorized to discharge up to 21.5 MGD of its peak WWF to San Lorenzo Creek by a separate Regional Water Board Order (Order No. R2-2006-0026). Under the industrial pretreatment permit issued by DSRSD, Zone 7 groundwater reverse osmosis reject water is interruptible flow. The Order requires that DSRSD specify in the pretreatment permit that at times of peak WWF, discharge of Zone 7 groundwater reverse osmosis reject water to DSRSD will be suspended so as to not cause or contribute to any exceedance of EBDA's peak WWF limitation, or to any discharge under Order No. R2-2006-0026.

II. FINDINGS

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter Regional Water Board), finds:

A. Background

The City of Livermore is currently discharging under Order No. 00-089 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0038008, which was adopted on August 16, 2000.

The East Bay Dischargers Authority (EBDA) and Dublin San Ramon Services District (DSRSD) have also applied for reissuance of waste discharge requirements and NPDES Permits to discharge wastewaters through the EBDA outfall. The waste discharge requirements for EBDA and DSRSD are contained in separate Regional Water Board Orders (Order No. 00-087 and 00-088, respectively). DSRSD and the City of Livermore are member agencies of the Livermore Amador Valley Water Management Agency (LAVWMA).

The City of Livermore, EBDA and LAVWMA are hereinafter collectively referred to as Discharger. The City of Livermore submitted a Report of Waste Discharge, dated February 11, 2005, and applied for an NPDES permit renewal to discharge up to 8.5 MGD average dry weather design flow (ADWF) of treated wastewater from the Livermore Water Reclamation Plant, hereinafter Facility, through the EBDA Joint Outfall. The application was deemed complete on August 18, 2005, pursuant to a Regional Water Board letter extending the requirements of Order No. 00-089 until the permit is renewed.

B. Facility Description

1. The City of Livermore owns and operates the Livermore Water Reclamation Plant. The treatment system consists of grit removal, primary clarification, activated sludge, secondary clarification, and disinfection. Biosolids are anaerobically digested, dewatered with belt filter presses, and beneficially reused for alternative daily cover or for land application. The City discharges treated effluent to the Livermore Interceptor that transports flow to the LAVWMA export pump station where it combines with DSRSD's treated effluent. The combined wastewaters flow to two flow-equalization basins, and are pumped via LAVWMA's pipeline to the East Bay Dischargers Authority (EBDA) system. EBDA transports LAVWMA treated wastewater jointly with the treated wastewater from its member agencies to its dechlorination station near the San Leandro Marina (Marina Dechlorination Facility) and thence to its deepwater outfall in Lower San Francisco Bay west of the Oakland Airport. The outfall's diffuser is located 37,000 feet from shore; it discharges 23.5 feet below the water surface (MLLW); and it is designed to provide minimum initial dilution of greater than 10:1 at all times. The City of Livermore owns and maintains a wastewater collection system that conveys wastewater to the Treatment Plant. The collection system consists of 280 miles of sewer pipelines and two pump stations. It serves the area within Livermore's Urban Growth Boundary (UGB), and the Ruby Hill residential development in the City of Pleasanton, located outside the UGB. EBDA is responsible for the combined transport, dechlorination, and discharge of LAVWMA's treated wastewater by contractual agreement.

2. LAVWMA is a joint powers agency created in 1974 for wastewater management planning for the service areas of the City of Livermore and DSRSD. By contractual agreement, DSRSD is responsible for operating and maintaining LAVWMA's export pump station and pipeline facilities and for performing and submitting the self-monitoring requirements for the LAVWMA facilities. LAVWMA is responsible for transporting chlorinated effluent from its member agencies to the EBDA system. LAVWMA is not empowered to take actions to secure member agency compliance with requirements.

3. Both EBDA and LAVWMA are Joint Exercise of Powers Agencies (JEPAs) which exist under JEPA agreements to operate treated wastewater transport, treatment, and disposal facilities. Since LAVWMA and its member agencies are not signatories to the EBDA JEPA, the EBDA/LAVWMA agreement empowers EBDA to monitor discharges by LAVWMA member agencies into the EBDA system and requires LAVWMA, as a condition of continuing service, to comply with all requirements prescribed by the Regional Water Board, in its member agencies' individual permits, except residual chlorine, for which EBDA will be responsible.

4. For the purposes of this Order, compliance with the effluent limitations will be determined at the combined effluent discharge of the four EBDA plants and two LAVWMA plants, except as noted. Regional Water Board enforcement actions for violations of effluent limitations that pertain only to the combined effluent will be applied to EBDA, and EBDA will be responsible for responding to enforcement actions in conjunction with its JEPA and the EBDA/LAVWMA agreement. Though this Order establishes effluent limitations at the EBDA Common Outfall, it is the Regional Water Board's expectation that each EBDA member agency maintains and operates its treatment facility to fully meet technology based Secondary Treatment Standards. As such, the Regional Water Board reserves its discretion to enforce against individual EBDA member agencies for failure to meet those technology limits.

5. As used herein, "Common Outfall" means the EBDA Common Outfall; "Combined Discharge" refers to the waste stream at any point where all wastes tributary to that outfall are present; and "Individual Treatment Plant" means a treatment facility operated by a member agency of either EBDA or LAVWMA.

6. **Attachment B-1** provides a location map of the Livermore facilities. **Attachment B-2** illustrates the flow of treated wastewater from the Livermore facilities to LAVWMA, on to EBDA, for discharge jointly with the treated wastewater from the EBDA member agencies to the Lower San Francisco Bay. **Attachment C** provides a flow schematic of the Livermore Water Reclamation Plant.

C. Legal Authorities

This Order is issued pursuant to section 402 of the Federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and Chapter 5.5, Division 7 of the California Water Code (CWC). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste

Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4 of the CWC for discharges that are not subject to regulation under CWA section 402.

D. Background and Rationale for Requirements

The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and through special studies. **Attachments A** through **H**, which contain background information and rationale for Order requirements, are hereby incorporated into this Order and, thus, constitute part of the Findings for this Order.

E. California Environmental Quality Act (CEQA)

This action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21100, et seq.) in accordance with Section 13389 of the CWC.

F. Technology-based Effluent Limitations

The Code of Federal Regulations (CFR) at 40 CFR §122.44(a) requires that permits include applicable technology-based limitations and standards. This Order includes technology-based effluent limitations based on Secondary Treatment Standards at 40 CFR Part 133. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F).

G. Water Quality-based Effluent Limitations

Section 122.44(d) of 40 CFR requires that where reasonable potential ("RP") to cause or contribute to an exceedance of applicable water quality standards exists, permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where numeric water quality objectives (WQOs) have not been established, 40 CFR §122.44(d) specifies that WQBELs may be established using USEPA criteria guidance under CWA section 304(a) or proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information, including site specific applicability, or an indicator parameter. A detailed discussion of the water quality-based effluent limitations is included in the Fact Sheet **(Attachment F)**.

H. Water Quality Control Plans

The Regional Water Board adopted a Water Quality Control Plan for the San Francisco Bay Basin, *Water Quality Control Plan (revised in 2005)*, (hereinafter Basin Plan) that designates beneficial uses, establishes WQOs, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Beneficial uses applicable to Lower San Francisco Bay are as follows:

Table 2. Basin Plan Beneficial Uses of Lower San Francisco Bay

Discharge Point	Receiving Water Name	Beneficial Use(s)
001 (M-001)	Lower San Francisco Bay	Industrial Service Supply (IND) Navigation (NAV) Water Contact Recreation (REC1) Non-contact Water Recreation (REC2) Ocean Commercial and Sport Fishing (COMM) Wildlife Habitat (WILD) Preservation of Rare and Endangered Species (RARE) Fish Migration (MIGR) Shellfish Harvesting (SHELL), and Estuarine Habitat (EST)

Requirements of this Order specifically implement the Basin Plan.

I. National Toxics Rule (NTR) and California Toxics Rule (CTR)

USEPA adopted the NTR on December 22, 1992, which was amended on May 4, 1995, and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR, which incorporated the NTR criteria that were applicable in California. The CTR was amended on February 13, 2001. These rules include water quality criteria (WQC) for priority pollutants and are applicable to this discharge.

J. State Implementation Policy

On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Boards in their basin plans, with the exception of the provision on alternate test procedures for individual discharges that have been approved by USEPA Regional Administrator. The alternate test procedures provision was effective on May 22, 2000. The SIP became effective on May 18, 2000. The State Water Board subsequently amended the SIP on February 24, 2005, and the amendments became effective on July 31, 2005. The SIP includes procedures for determining the need for and calculating WQBELs and requires dischargers to submit data sufficient to do so. Requirements of this Order implement the SIP.

K. Compliance Schedules and Interim Requirements

Section 2.1 of the SIP provides that, based on a discharger's request and demonstration that it is infeasible for an existing discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under Section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond

10 years from the effective date of the SIP (or May 18, 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation exceeds one year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Basin Plan, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement new or revised WQOs. This Order includes compliance schedules and interim effluent limitations. A detailed discussion of the basis for the compliance schedules and interim effluent limitations is included in the Fact Sheet (**Attachment F**).

L. Alaska Rule.

On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes. (40 C.F.R. § 131.21; 65 Fed. Reg. 24641 (April 27, 2000).) Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA.

M. Stringency of Requirements for Individual Pollutants.

This Order contains restrictions on individual pollutants that are no more stringent than required by the federal CWA. Individual pollutant restrictions consist of technology-based restrictions and water quality-based effluent limitations. The technology-based effluent limitations consist of restrictions on Carbonaceous Biochemical Oxygen Demand (CBOD), Total Suspended Solids (TSS), Oil and Grease, pH, and chlorine residual. Restrictions on these pollutants are specified in federal regulations and have been in the Basin Plan since before May 30, 2000, as discussed in the attached Fact Sheet, **Attachment F**. The permit's technology-based pollutant restrictions are no more stringent than required by the CWA. Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to section 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to section 131.21(c)(1). The remaining water quality objectives and beneficial uses implemented by this Order (specifically Arsenic, Cadmium, Chromium (VI), Copper (freshwater), Lead, Nickel, Silver (1-hour), Zinc) were approved by USEPA on January 5, 2005, and are applicable water quality standards pursuant to section 131.21(c)(2). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.

N. Antidegradation Policy

Section 131.12 of 40 CFR requires that State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16, which incorporates the requirements of federal antidegradation policy. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. As discussed in detail in the Fact Sheet (**Attachment F**) the permitted discharge is consistent with the antidegradation provision of 40 CFR §131.12 and State Water Board Resolution 68-16.

O. Anti-Backsliding Requirements

Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR § 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. Some effluent limitations in the previous Order have been removed. As discussed in detail in the Fact Sheet (**Attachment F**), this removal of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

P. Monitoring and Reporting

Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program (MRP) is provided in **Attachment E**. The MRP may be amended by the Executive Officer pursuant to USEPA regulation 40 CFR 122.62, 122.63, and 124.5.

Q. Standard and Special Provisions

Standard Provisions, which in accordance with 40 CFR §§122.41 and 122.42, apply to all NPDES discharges and must be included or referenced in every NPDES permit, are provided in Attachment D. The Regional Water Board has also included in this Order special provisions applicable to the Discharger (**Attachment G**). A rationale for the provisions contained in this Order is provided in the attached Fact Sheet (**Attachment F**).

R. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet (**Attachment F**) of this Order.

S. Consideration of Public Comment

The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet (Attachment F) of this Order.

III. DISCHARGE PROHIBITIONS

A. Discharge of treated wastewater at a location or in a manner different from that described in this Order is prohibited. Discharge at any point at which the treated wastewater does not receive an initial dilution of at least 10:1 is prohibited.

B. The bypass of untreated or partially treated wastewater to waters of the United States is prohibited, except as provided for in the conditions stated in 40 CFR 122.41(m)(4) and in A.12 of the *Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits, August 1993* (**Attachment G**).

C. The average dry weather flow of Livermore shall not exceed 8.5 MGD. This average dry weather flow limit may be increased to 11.1 MGD, upon completion of the planned new treatment plant facilities, completion of the tasks identified in Provision VI.C.2.c, and approval by the Executive Officer. The Discharger submitted an antidegradation study for plant improvements which affirms that an increase in the effluent discharge flow rate conforms to federal and state Antidegradation Policy requirements. Actual average dry weather flow shall be determined for compliance with this prohibition over three consecutive dry weather months each year.

D. Any sanitary sewer overflow that results in a discharge of untreated or partially treated wastewater to waters of the United States is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

1. Effluent Limitations for Conventional Pollutants

Table 3. Effluent Limitations for Conventional Pollutants

Parameter	Compliance Point[3]	Units	Effluent Limitations				
			Average Monthly	Average Weekly	Max. Daily	Instantaneous Minimum	Instantaneous Maximum
a. Carbonaceous Biochemical Oxygen Demand 5-day @ 20°C	M-002E	mg/L	25	40	--	--	--
b. Total Suspended Solids	M-002E	mg/L	30	45	--	--	--
c. Oil and Grease	M-002E	mg/L	10	--	20	--	--
d. pH [1]	M-002E	standard unit	--	--	--	6.0	9.0
e. Total Chlorine Residual [2]	M-001	mg/L	--	--	--	--	0.0

Footnotes for Table 3:

(1) If the Discharger monitors pH continuously, Pursuant to 40 CFR § 401.17, the Discharger shall be in compliance with the pH limitation specified herein, provided that both of the following conditions are

satisfied: (i) the total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and (ii) no individual excursion from the range of pH values shall exceed 60 minutes.

(2) Requirement defined as below the limit of detection in standard test methods defined in the latest edition of *Standard Methods for the Examination of Water and Wastewater*. The Discharger may elect to use a continuous on-line monitoring system(s) for measuring flows, chlorine residual and sodium bisulfite (or other dechlorinating chemical) dosage (including a safety factor) and concentration to prove that chlorine residual exceedances are false positives. If convincing evidence is provided, Regional Water Board staff may conclude that these false positive chlorine residual exceedances are not violations of this permit limitation.

(3) Compliance Points as defined in the attached MRP, **Attachment E**.

2. **CBOD and TSS 85% Percent Removal, M-002E:** The arithmetic mean of the CBOD (5-day, 20° C) and TSS values for effluent samples collected at M-002E, in each calendar month shall not exceed 15 percent of the arithmetic mean of influent samples collected at M-INF-E during the same calendar month.

3. **Fecal Coliform Bacteria, M-001:** The treated wastewater as measured at M-001 shall meet the following limits of bacteriological quality.

   The five day geometric mean fecal coliform density shall not exceed 500 MPN/100 mL, and the ninetieth percentile value shall not exceed 1,100 MPN/100 mL.

4. **Effluent Limitations for Toxics Substances, M-001**
   The discharge of treated wastewater shall maintain compliance with the effluent limitations listed in Table 4 for toxic pollutants, at Discharge Point 001 (the Common Outfall), with compliance measured at Monitoring Location M-001 as described in the attached MRP (**Attachment E**):

Table 4. Effluent Limitations for Toxic Substances [1,7]

Constituent	Water Quality-Based Effluent Limits (WQBELs)		Interim Limits	
	Maximum Daily (MDEL) (µg/L)	Average Monthly (AMEL) (µg/L)	Maximum Daily (µg/L)	Average Monthly (µg/L)
Copper [2]	100	71	---	---
Mercury [3]	0.037	0.022	---	0.087
Nickel	160	79	---	---
Zinc	580	---	---	---
Cyanide [4][5]	6.4	3.1	21	---
Heptachlor [6]	0.00042	0.00021	---	0.01

Footnotes for Table 4:

(1) (a) All analyses shall be performed using current U.S. EPA approved methods, or equivalent methods approved in writing by the Executive Officer.

(b) Limitations apply to the average concentration of all samples collected during the averaging period (daily = 24-hour period; monthly = calendar month).

(c) All metal limitations are total recoverable.

(2) Alternate Effluent Limits for Copper:

a. If a copper SSO for the receiving water becomes legally effective, resulting in adjusted saltwater CCC of 2.5 µg/L and CMC of 3.9 µg/L as documented in the *North of Dumbarton Bridge Copper and Nickel Site-Specific Objective (SSO) Derivation (Clean Estuary Partnership December 2004)*, upon its effective date, the following limitations shall supersede those copper limitations listed in Table 4 (the rationale for these effluent limitations can be found in the Fact Sheet [**Attachment F**]).

MDEL of 78 µg/L, and AMEL of 53 µg/L.

b. If a different copper SSO for the receiving water is adopted, the alternate WQBELs based on the SSO will be determined after the SSO effective date.

(3) The interim limit for mercury shall remain in effect until April 27, 2010, or until the Regional Water Board adopts a TMDL-based effluent limitation for mercury. WQBELs will be superseded by the TMDL. The mercury interim limit is derived from the Regional Water Board's *Statistical Analysis of Pooled Mercury Data, 2001*.

(4) The interim limit for cyanide shall remain in effect until April 27, 2010, or until the Regional Water Board adopts a site-specific objective for cyanide. Compliance may be demonstrated by measurement of weak acid dissociable cyanide.

(5) Alternate Effluent Limits for Cyanide at EBDA Common Outfall (001)

a. If a cyanide SSO for the receiving water becomes legally effective, resulting in adjusted saltwater criteria CCC of 2.9 µg/L (based on the assumptions in *Draft Staff Report on Proposed Site-Specific Water Quality Objectives and Effluent Limit Policy for Cyanide for San Francisco* Bay, dated November 10, 2005), upon its effective date, the following limitations shall supersede those cyanide limitations, above (the rationale for these effluent limitations can be found in the Fact Sheet [**Attachment F**]).

MDEL of 42 µg/L, and AMEL of 21 µg/L.

b. If a different cyanide SSO for the receiving water is adopted, the alternate WQBELs based on the SSO will be determined after the SSO effective date.

(6) The interim effluent limitation for heptachlor shall remain in effect until April 27, 2010, or until the Regional Water Board amends the limitation based on additional information or improved MLs. The final WQBELs shall become effective on April 28, 2010.

(7) A daily maximum or average monthly value for a given constituent shall be considered noncompliant with the effluent limitations only if it exceeds the effluent limitation and the Reporting Level for that constituent. As outlined in Section 2.4.5 of the SIP, the table below indicates the Minimum Level (ML) upon which the Reporting Level is based for compliance determination purposes. In addition, in order to perform reasonable potential analysis for future permit reissuance, the Discharger shall use methods with MLs lower than the applicable water quality objectives or water quality criteria (e.g., copper). A Minimum Level is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Constituent	Minimum Level	Units
Copper	2	µg/L
Mercury	0.0005	µg/L
Nickel	5	µg/L
Zinc	20	µg/L
Cyanide	5	µg/L
Heptachlor	0.01	µg/L

5. **Acute Toxicity, M-001:**

   a. Representative samples of the discharge as measured at M-001 shall meet the following limits for acute toxicity: Bioassays shall be conducted in compliance with Section V.A of the Monitoring and Reporting Program (MRP, **Attachment E**).

      The survival of organisms in undiluted combined effluent shall be an eleven (11) sample median value of not less than 90 percent survival, and an eleven (11) sample 90 percentile value of not less than 70 percent survival.

   b. These acute toxicity limitations are further defined as follows:

      11 sample median: A bioassay test showing survival of less than 90 percent represents a violation of this effluent limit, if five or more of the past ten or less bioassay tests show less than 90 percent survival.

      90th percentile: A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit, if one or more of the past ten or less bioassay tests show less than 70 percent survival.

   c. Bioassays shall be performed using the most up-to-date USEPA protocol and the most sensitive species as specified in writing by the Executive Officer based on the most recent screening test results. Bioassays shall be conducted in compliance with "Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms," currently 5th Edition (EPA-821-R-02-012), with exceptions granted to the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP) upon the Discharger's request with justification.

   d. If the Discharger can demonstrate to the satisfaction of the Executive Officer that toxicity exceeding the levels cited above is caused by ammonia and that the ammonia in the discharge is not adversely impacting receiving water quality or beneficial uses, then such toxicity does not constitute a violation of this effluent limitation.

6. **Chronic Toxicity, M-001**

   a. Compliance with the Basin Plan narrative chronic toxicity objective shall be demonstrated according to the following tiered requirements based on results from representative samples of the discharge, as measured at M-001, meeting test acceptability criteria and Section V.B of the MRP (**Attachment E**). Failure to conduct the required

toxicity tests or a TRE within a designated period shall result in the establishment of effluent limitations for chronic toxicity.

1) Conduct routine monitoring.

2) Accelerate monitoring after exceeding a three sample median value of 10 chronic toxicity units (TUc) or a single sample maximum of 20 TUc or greater. Accelerated monitoring shall consist of monthly monitoring.

3) Return to routine monitoring if accelerated monitoring does not exceed either "trigger" in (2), above.

4) If accelerated monitoring confirms consistent toxicity above either "trigger" in (2), above, initiate toxicity identification evaluation/toxicity reduction evaluation (TIE/TRE) in accordance with a workplan submitted in accordance with Section V.B of the MRP (**Attachment E**), and that incorporates any and all comments from the Executive Officer;

5) Return to routine monitoring after appropriate elements of TRE workplan are implemented and either the toxicity drops below "trigger" levels in (2), above, or, based on the results of the TRE, the Executive Officer authorizes a return to routine monitoring.

b. Test Species and Methods

The Discharger shall conduct routine monitoring with the test species and protocols specified in Section V.B of the MRP (**Attachment E**). The Discharger shall also perform Chronic Toxicity Screening Phase monitoring as described in the Appendix E-1 of the MRP (Attachment E). Chronic Toxicity Monitoring Screening Phase Requirements, Critical Life Stage Toxicity Tests and definitions of terms used in the chronic toxicity monitoring are identified in **Appendices E-1 and E-2** of the MRP (**Attachment E**).

7. Mercury Mass Emission Limitation, M-001

Until TMDL and wasteload allocation (WLA) efforts for mercury provide enough information to establish a different WQBEL, the Discharger shall demonstrate that the current mercury mass loading to the receiving water, as measured at M-001 does not increase by complying with the following:

a. Mass limit. The 12-month moving average annual load for mercury shall not exceed 0.384 kilograms per month (kg/mo).

b. Compliance with this limit shall be evaluated using 12-month moving average mass loading over the previous 12 months of monitoring, computed as described below:

Monthly Mass Loading (kg/mo) = monthly plant discharge flow (inMGD) from the Outfall (001) × monthly effluent concentration measurements (in µg/L) corresponding to

the above flow, for samples taken at 001 × 0.1151 (conversion factor to convert million gallons/day × µg/L to kg/mo).

12-month Moving Average Hg Mass Loading = Running average of last 12 monthly mercury mass loadings in kg/mo.

If more than one measurement is obtained in a calendar month, the average of these concentrations is used as the monthly value for that month. If the results are less than the method detection limit used, the concentrations are assumed to be equal to the method detection limit.

c. The mercury TMDL and its WQBELs and WLAs will supersede the mercury WQBELs listed in Table 4 and this interim mass emission limitation upon the TMDL's adoption. The Clean Water Act's anti-backsliding rule, Section 402(o), indicates that this Order may be modified to include a less stringent requirement following adoption of the TMDL and WLA, if the requirements for an exception to the rule are met.

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. The discharge shall not cause the following in Lower San Francisco Bay.

1. The discharge shall not cause the following conditions to exist in waters of the State at any place:

a. Floating, suspended, or deposited macroscopic particulate matter or foams;

b. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses;

c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

d. Visible, floating, suspended, or deposited oil and other products of petroleum origin; and

e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on wildlife, waterfowl, or other aquatic biota, or which render any of these unfit for human consumption, either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State within one foot of the water surface:

a. Dissolved Oxygen 5.0 mg/L, minimum

The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation. When natural factors cause concentrations less than that specified above, then the discharge shall not cause further reduction in ambient dissolved oxygen concentrations.

b.	Dissolved Sulfide	Natural background levels
c.	pH	Within 6.5 and 8.5
d.	Un-ionized Ammonia	0.025 mg/L as N, annual median 0.4 mg/L as N, max.

B. Groundwater Limitations – N/A

VI. PROVISIONS

A. Standard Provisions

1. **Standard Provisions.** The Discharger shall comply with Federal Standard Provisions included in **Attachment D** of this Order.

2. **Regional Water Board Standard Provisions.** The Discharger shall comply with all applicable items of the *Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits, August 1993* (Standard Provisions, **Attachment G**), and any amendments thereto. Where provisions or reporting requirements specified in this Order are different from equivalent or related provisions or reporting requirements given in the Standard Provisions, the specifications of this Order shall apply. Duplicative requirements in the federal Standard Provisions in VI.A.1.2, above (**Attachment D**) and the regional Standard Provisions (Attachment G) are not separate requirements such that violation of a duplicative requirement constitutes two separate violations.

B. Monitoring and Reporting Program Requirements

The Discharger shall comply with the Monitoring and Reporting Program (MRP), and future revisions thereto, in **Attachment E**. The Discharger shall also comply with the requirements contained in *Self-Monitoring Program, Part A, August 1993* (**Attachment G**).

C. Special Provisions

1. Reopener Provisions

The Regional Water Board may modify or reopen this Order prior to its expiration date in any of the following circumstances as allowed by law:

a. If present or future investigations demonstrate that the discharge(s) governed by this Order will or have a reasonable potential to cause or contribute to, or will cease to, have adverse impacts on water quality and/or beneficial uses of the receiving waters.

b. If new or revised WQOs, or TMDLs come into effect for the San Francisco Bay estuary and contiguous water bodies (whether statewide, regional, or site-specific). In such cases, effluent limitations in this Order will be modified as necessary to reflect updated WQOs and waste load allocations in TMDLs. Adoption of effluent limitations contained in this Order is not intended to restrict in any way future modifications based on legally adopted WQOs, TMDLs, or as otherwise permitted under Federal regulations governing NPDES permit modifications.

c. If translator or other water quality studies provide a basis for determining that a permit condition(s) should be modified.

d. If administrative or judicial decision on a separate NPDES permit or WDR that addresses requirements similar to this discharge.

e. Or as otherwise authorized by law.

The Dischargers may request permit modification based on the above. The Dischargers shall include in any such request an antidegradation and antibacksliding analysis, as applicable.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Effluent Characterization for Selected Constituents

The Discharger shall continue to monitor and evaluate the discharge from Outfall 001 (measured at M-001) for the constituents listed in Enclosure A of the Regional Water Board's August 6, 2001 Letter, according to the sampling frequency specified in the attached MRP **(Attachment E)**. Compliance with this requirement shall be achieved in accordance with the specifications stated in the Regional Water Board's August 6, 2001 Letter under "Effluent Monitoring for Major Discharger."

The Discharger shall evaluate on an annual basis if concentrations of any constituent increase over past performance. The Discharger shall investigate the cause of the increase. The investigation may include, but need not be limited to, an increase in the effluent monitoring frequency, monitoring of internal process streams, and monitoring of influent sources. This may be satisfied through identification of these constituents as "Pollutants of Concern" in the Discharger's Pollutant Minimization Program described in **Provision C.3.b**, below. A summary of the annual evaluation of data and source investigation activities shall also be reported in the annual self-monitoring report.

A final report that presents all the data shall be submitted to the Regional Water Board no later than 180 days prior to the Order expiration date. This final report shall be submitted with the application for permit reissuance.

b. Ambient Background Receiving Water Study

The Discharger shall collect or participate in collecting background ambient receiving water monitoring for priority pollutants that is required to perform RPA and to calculate effluent limitations. The data on the conventional water quality parameters (pH, salinity,

and hardness) shall also be sufficient to characterize these parameters in the receiving water at a point after the discharge has mixed with the receiving waters. This provision may be met through monitoring through the Collaborative Bay Area Clean Water Agencies (BACWA) Study, or a similar ambient monitoring program for San Francisco Bay. This permit may be reopened, as appropriate, to incorporate effluent limits or other requirements based on Regional Water Board review of these data.

The Discharger shall submit a final report that presents all the data to the Regional Water Board 180 days prior to Order expiration. This final report shall be submitted with the application for permit reissuance.

c. Permitted Treatment Plant Flows

The permitted average dry weather flow capacity identified in Prohibition III.C. of this Order may be increased to 11.1 MGD by written approval from the Executive Officer, in accordance with the following conditions:

1) Completion of the proposed improvements to the wastewater treatment facility.

2) Documentation of adequate reliability, capability and performance of the wastewater facilities in order to maintain compliance with waste discharge requirements. Hydraulic and organic loading capacities of the treatment facilities shall be evaluated by appropriate combinations of desk-top analyses and treatment process stress testing to simulate design peak loading conditions. Evaluation shall include treatment process operations under both dry weather and wet weather design flow conditions, and effluent disposal capacity including storage and discharge to land through reclamation.

3) Compliance with all applicable provisions of the California Environmental Quality Act (California Public Resources Code Division 13, Chapter 3, Section 21100 et seq.).

4) Adequate financial provisions to ensure adequate operation and maintenance of the wastewater facilities.

5) Documentation of completion or implementation of the above measures, to the Executive Officer's satisfaction.

d. Optional Mass Offset

If the Discharger can demonstrate that further net reductions of the total mass loadings of 303(d)-listed pollutants to the receiving water cannot be achieved through economically feasible measures such as aggressive source control, wastewater reuse, and treatment plant optimization, but only through a mass offset program, the Discharger may submit to the Regional Water Board for approval a mass offset plan to reduce 303(d)-listed pollutants to the same watershed or drainage basin. The Regional Water Board may modify this Order to allow an approved mass offset program.

e. Status Report on 303(d)-Listed Pollutants, Site-Specific Objectives (SSOs) and TMDL

By January 31 of each year, the Discharger shall submit an update to the Regional Water Board to document its participation efforts toward development of the TMDL(s) or SSO(s). The Discharger can submit updates through the regional Bay Area Clean Water Agencies (BACWA) studies for these pollutants. These status reports must address, but not be limited to, the efforts in support of the SSO or TMDL for copper, cyanide and mercury.

f. Study to Verify Protectiveness of Alternate Fecal Coliform Limits

The Discharger shall conduct a study to verify that the alternate fecal coliform limits in this Order continue to not adversely impact beneficial uses. The study must include at a minimum these following elements:

i) Monitoring and analysis for total coliform, fecal coliform, and enterococci.
ii) Monitoring in the receiving water at a minimum of four locations with at least one of these stations located over and within 500 feet of the outfall.
iii) Monitoring shall include at least five events, at each station, spaced over a 30-day period.
iv) Monitoring shall be timed to include worst case conditions such as slack tide, wet weather season (fresher receiving water resulting in lower bacteria die-off), and low sunlight (e.g., cloudy days, dawn or dusk).

The Discharger shall submit a report describing the results of this study along with the Report of Waste Discharge for permit renewal.

3. Best Management Practices and Pollutant Minimization Program

a. The Discharger shall continue to implement and improve, in a manner acceptable to the Executive Officer, its existing Pollutant Minimization Program to reduce pollutant loadings of copper, mercury, and cyanide to the treatment plant and therefore to the receiving waters. In addition, the Discharger shall implement any applicable additional pollutant minimization measures described in Basin Plan implementation requirements associated with the copper SSO and cyanide SSO if and when each of those SSOs become effective and alternate limits take effect.

b. The Discharger shall submit an annual report, acceptable to the Executive Officer, no later than February 28th of each calendar year. The annual report shall cover January through December of the preceding year. Each annual report shall include at least the following information:

i. *A brief description of its treatment plant, treatment plant processes and service area.*

ii. *A discussion of the current pollutants of concern.* Periodically, the discharger shall analyze its own situation to determine which pollutants are currently a problem and/or which pollutants may be potential future problems. This discussion shall include the reasons why the pollutants were chosen.

iii. *Identification of sources for the pollutants of concern.* This discussion shall include how the Discharger intends to estimate and identify sources of the pollutants. The Discharger should also identify sources or potential sources not directly within the ability or authority of the Discharger to control, such as pollutants in the potable water supply and air deposition.

iv. *Identification of tasks to reduce the sources of the pollutants of concern.* This discussion shall identify and prioritize tasks to address the Discharger's pollutants of concern. The Discharger may implement tasks themselves or participate in group, regional, or national tasks that will address its pollutants of concern. The Discharger is strongly encouraged to participate in group, regional, or national tasks that will address its pollutants of concern whenever it is efficient and appropriate to do so. A time line shall be included for the implementation of each task.

v. *Outreach to employees.* The Discharger shall inform employees about the pollutants of concern, potential sources, and how they might be able to help reduce the discharge of these pollutants of concern into the treatment facilities. The Discharger may provide a forum for employees to provide input to the program.

vi. *Continuation of Public Outreach Program.* The Discharger shall prepare a public outreach program to communicate pollution prevention to its service area. Outreach may include participation in existing community events such as county fairs, initiating new community events such as displays and contests during Pollution Prevention Week, conducting school outreach programs, conducting plant tours, and providing public information in newspaper articles or advertisements, radio or television stories or spots, newsletters, utility bill inserts, and web site. Information shall be specific to the target audiences. The Discharger shall coordinate with other agencies as appropriate.

vii. *Discussion of criteria used to measure Program's and tasks' effectiveness.* The Discharger shall establish criteria to evaluate the effectiveness of its Pollution Minimization Program. This shall also include a discussion of the specific criteria used to measure the effectiveness of each of the tasks in item b.iii., b.iv., b.v., and b.vi.

viii. *Documentation of efforts and progress.* This discussion shall detail all of the Discharger's activities in the Pollution Minimization Program during the reporting year.

ix. *Evaluation of Program's and tasks' effectiveness.* This Discharger shall utilize the criteria established in v.ii. to evaluate the Program's and tasks' effectiveness.

x. *Identification of specific tasks and time schedules for future efforts.* Based on the evaluation, the Discharger shall detail how it intends to continue or change its tasks in order to more effectively reduce the amount of pollutants to the treatment plant, and subsequently in its effluent.

c. Pollutant Minimization Program for Pollutants with Effluent Limitations

The Discharger shall develop and conduct a Pollutant Minimization Program (PMP) as further described below when there is evidence (e.g., sample results reported as DNQ when the effluent limitation is less than the MDL, sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a priority pollutant is present in the effluent above an effluent limitation and either:

i. A sample result is reported as DNQ and the effluent limitation is less than the RL; or

ii. A sample result is reported as ND and the effluent limitation is less than the MDL, using definitions described in the SIP.

d. If triggered by the reasons in c. above, the Discharger's PMP shall include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board:

i. An annual review and semi-annual monitoring of potential sources of the reportable priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling, or alternative measures approved by the Executive Officer when it is demonstrated that source monitoring is unlikely to produce useful analytical data;

ii. Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system, or alternative measures approved by the Executive Officer, when it is demonstrated that influent monitoring is unlikely to produce useful analytical data;

iii. Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation;

iv. Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and

v. The annual report required by 3.b. above, shall specifically address the following items:

1. All PMP monitoring results for the previous year;

2. A list of potential sources of the reportable priority pollutant(s);

3. A summary of all actions undertaken pursuant to the control strategy; and

4. A description of actions to be taken in the following year.

4. Requirement to Support SSO and TMDL, and Assure Compliance with Final Limits

This Order grants a compliance schedule for mercury, and alternative final limits for cyanide and copper that are based on pending SSOs. The Discharger shall participate in and support the development of the mercury TMDL, cyanide site-specific objective (SSO), and copper SSO. In the event the mercury TMDL, or cyanide SSO are not developed by July 1, 2009, the Discharger shall submit by July 1, 2009, a schedule that documents how it will further reduce cyanide and mercury concentrations to ensure compliance with the final limits specified in Effluent Limitations and Discharge Specifications IV.7.

5. Construction, Operation and Maintenance Specifications

a. Wastewater Facilities, Review and Evaluation, and Status Reports

1) The Discharger shall operate and maintain its wastewater collection, treatment, and disposal facilities in a manner to ensure that all facilities are adequately staffed, supervised, financed, operated, maintained, repaired, and upgraded as necessary, in order to provide adequate and reliable transport, treatment, and disposal of all wastewater from both existing and planned future wastewater sources under the Discharger's service responsibilities.

2) The Discharger shall regularly review and evaluate its wastewater facilities and operation practices in accordance with section a.1 above. Reviews and evaluations shall be conducted as an ongoing component of the Discharger's administration of its wastewater facilities.

3) The Discharger shall provide the Executive Officer, upon request, a report describing the current status of its wastewater facilities and operation practices, including any recommended or planned actions and an estimated time schedule for these actions. The Discharger shall also include, in each annual self-monitoring report, a description or summary of review and evaluation procedures, and applicable wastewater facility programs or capital improvement projects.

b. Operations and Maintenance Manual (O&M), Review and Status Reports

1) The Discharger shall maintain an O&M Manual as described in the findings of this Order for the Discharger's wastewater facilities. The O&M Manual shall be maintained in usable condition and be available for reference and use by all applicable personnel.

2) The Discharger shall regularly review, revise, or update, as necessary, the O&M Manual(s) so that the document(s) may remain useful and relevant to current equipment and operation practices. Reviews shall be conducted annually, and revisions or updates shall be completed as necessary. For any significant changes in treatment facility equipment or operation practices, applicable revisions shall be completed within 90 days of completion of such changes.

3) The Discharger shall provide the Executive Officer, upon request, a report describing the current status of its O&M manual, including any recommended or planned actions and an estimated time schedule for these actions. The Discharger shall also include, in each annual self-monitoring report, a description or summary of review and evaluation procedures and applicable changes to its operations and maintenance manual.

c. Contingency Plan, Review and Status Reports

1) The Discharger shall maintain a Contingency Plan as required by Regional Water Board Resolution 74-10 (**Attachment G**) and as prudent in accordance with current municipal facility emergency planning. The discharge of pollutants in violation of this Order where the Discharger has failed to develop and/or adequately implement a Contingency Plan will be the basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.

2) The Discharger shall regularly review and update, as necessary, the Contingency Plan so that the plan may remain useful and relevant to current equipment and operation practices. Reviews shall be conducted annually, and updates shall be completed as necessary.

3) The Discharger shall provide the Executive Officer, upon request, a report describing the current status of its Contingency Plan review and update. The Discharger shall also include, in each annual self-monitoring report, a description or summary of review and evaluation procedures and applicable changes to its Contingency Plan.

6. Special Provisions for POTWs

a. Pretreatment Program

1) Pretreatment Program: The Discharger shall implement and enforce its approved pretreatment program in accordance with Federal Pretreatment Regulations (40 CFR § 403), pretreatment standards promulgated under Section 307(b), 307(c), and 307(d) of the Clean Water Act, pretreatment requirements specified under 40 CFR § 122.44(j), and the requirements in **Attachment H**, "Pretreatment Requirements." The Discharger's responsibilities include, but are not limited to:

   i. Enforcement of National Pretreatment Standards of 40 CFR §§ 403.5 and 403.6;

   ii. Implementation of its pretreatment program in accordance with legal authorities, policies, procedures, and financial provisions described in the General Pretreatment regulations (40 CFR § 403) and its approved pretreatment program;

   iii. Submission of reports to USEPA, the State Water Board, and the Regional Water Board, as described in **Attachment H** "Pretreatment Requirements".

   iv. Evaluate the need to revise local limits under 40 CFR § 403.5(c)(1); and within 180 days after the effective date of this Order, submit a report acceptable to the Executive Officer describing the changes with a plan and schedule for implementation. To ensure no significant increase in the discharge of copper, and thus compliance with antidegradation requirements, the Discharger shall not consider eliminating or relaxing local limits for copper in this evaluation.

2) The Discharger shall implement its approved pretreatment program and the program shall be an enforceable condition of this permit. If the Discharger fails to perform the pretreatment functions, the Regional Water Board, the State Water Board, or the USEPA may take enforcement actions against the Discharger as authorized by the Clean Water Act.

b. Sludge Management Practices Requirements

1) All sludge generated by the Discharger must be disposed of in a municipal solid waste landfill, reused by land application, or disposed of in a sludge-only landfill in accordance with 40 CFR §503. If the Discharger desires to dispose of sludge by a different method, a request for permit modification must be submitted to USEPA 180 days before start-up of the alternative disposal practice. All the requirements in 40 CFR §503 are enforceable by USEPA whether or not they are stated in an NPDES permit or other permit issued to the Discharger. The Regional Water Board should be copied on relevant correspondence and reports forwarded to USEPA regarding sludge management practices.

2) Sludge treatment, storage and disposal or reuse shall not create a nuisance, such as objectionable odors or flies, or result in groundwater contamination.

3) The Discharger shall take all reasonable steps to prevent or minimize any sludge use or disposal which has a likelihood of adversely affecting human health or the environment.

4) The discharge of sludge shall not cause waste material to be in a position where it is or can be carried from the sludge treatment and storage site and deposited in waters of the State.

5) The sludge treatment and storage site shall have facilities adequate to divert surface runoff from adjacent areas, to protect boundaries of the site from erosion, and to prevent any conditions that would cause drainage from the materials in the temporary storage site. Adequate protection is defined as protection from at least a 100-year storm and protection from the highest possible tidal stage that may occur.

6) For sludge that is applied to the land, placed on a surface disposal site, or fired in a sludge incinerator as defined in 40 CFR §503, the Discharger shall submit an annual report to USEPA and the Regional Water Board containing monitoring results and pathogen and vector attraction reduction requirements as specified by 40 CFR §503, postmarked February 15 of each year, for the period covering the previous calendar year.

7) Sludge that is disposed of in a municipal solid waste landfill must meet the requirements of 40 CFR §258. In the annual self-monitoring report, the Discharger shall include the amount of sludge disposed of and the landfill(s) to which it was sent.

8) Permanent on-site sludge storage or disposal activities are not authorized by this permit. A report of Waste Discharge shall be filed and the site brought into

compliance with all applicable regulations prior to commencement of any such activity by the Discharger.

9) Sludge Monitoring and Reporting Provisions of this Regional Water Board's Standard Provisions (**Attachment G**), apply to sludge handling, disposal and reporting practices.

10) The Regional Water Board may amend this permit prior to expiration if changes occur in applicable state and federal sludge regulations.

c. Sanitary Sewer Overflows and Sewer System Management Plan

The Discharger's collection system is part of the facility that is subject to this Order. As such, the Discharge must properly operate and maintain its collection system (**Attachment D**, Standard Provisions - Permit Compliance, subsection I.D). The Discharger must report any noncompliance (**Attachment D**, Standard Provision - Reporting, subsections V.E.1 and V.E.2), and mitigate any discharge from the Discharger's collection system in violation of this Order (**Attachment D**, Standard Provisions - Permit Compliance, subsection I.C). The General Waste Discharge Requirements for Collection System Agencies (Order No. 2006-0003 DWQ) has requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows. While the Discharger must comply with both the General Waste Discharge Requirements for Collection System Agencies (General Collection System WDR) and this Order, the General Collection System WDR more clearly and specifically stipulates requirements for operation and maintenance and for reporting and mitigating sanitary sewer overflows. Implementation of the General Collection System WDR requirements for proper operation and maintenance and mitigation of spills will satisfy the corresponding federal NPDES requirements specified in this Order. Following reporting requirements in the General Collection System WDR will satisfy NPDES reporting requirements for sewage spills. Furthermore, the Discharger shall comply with the schedule for development of sewer system management plans (SSMPs) as indicated in the letter issued by the Regional Water Board on July 7, 2005, pursuant to Water Code Section 13267. Until the statewide on-line reporting system becomes operational, the Discharger shall report sanitary sewer overflows electronically according to the Regional Water Board's SSO reporting program.

VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in Section IV of this Order will be determined as specified below:

A. General

Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined in the MRP and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of

the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

B. Multiple Sample Data

When determining compliance with an AMEL ,AWEL, or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

C. Average Monthly Effluent Limitation (AMEL)

If the average (or when applicable, the median determined by subsection B above for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

D. Average Weekly Effluent Limitation (AWEL)

If the average (or when applicable, the median determined by subsection B above for multiple sample data) of daily discharges over a calendar week exceeds the AWEL for a given parameter, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that week for that parameter, resulting in 7 days of non-compliance. If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the Discharger will be considered out of compliance for that calendar week. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar week during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar week.

E. Maximum Daily Effluent Limitation (MDEL)

If a daily discharge (or when applicable, the median determined by subsection B above for multiple sample data of a daily discharge) exceeds the MDEL for a given parameter, the Discharger will be considered out of compliance for that parameter for that 1 day only within

the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

F. Instantaneous Minimum Effluent Limitation

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

G. Instantaneous Maximum Effluent Limitation

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

ATTACHMENT A – DEFINITIONS

Average Monthly Effluent Limitation (AMEL): the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL): the highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Daily Discharge: Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

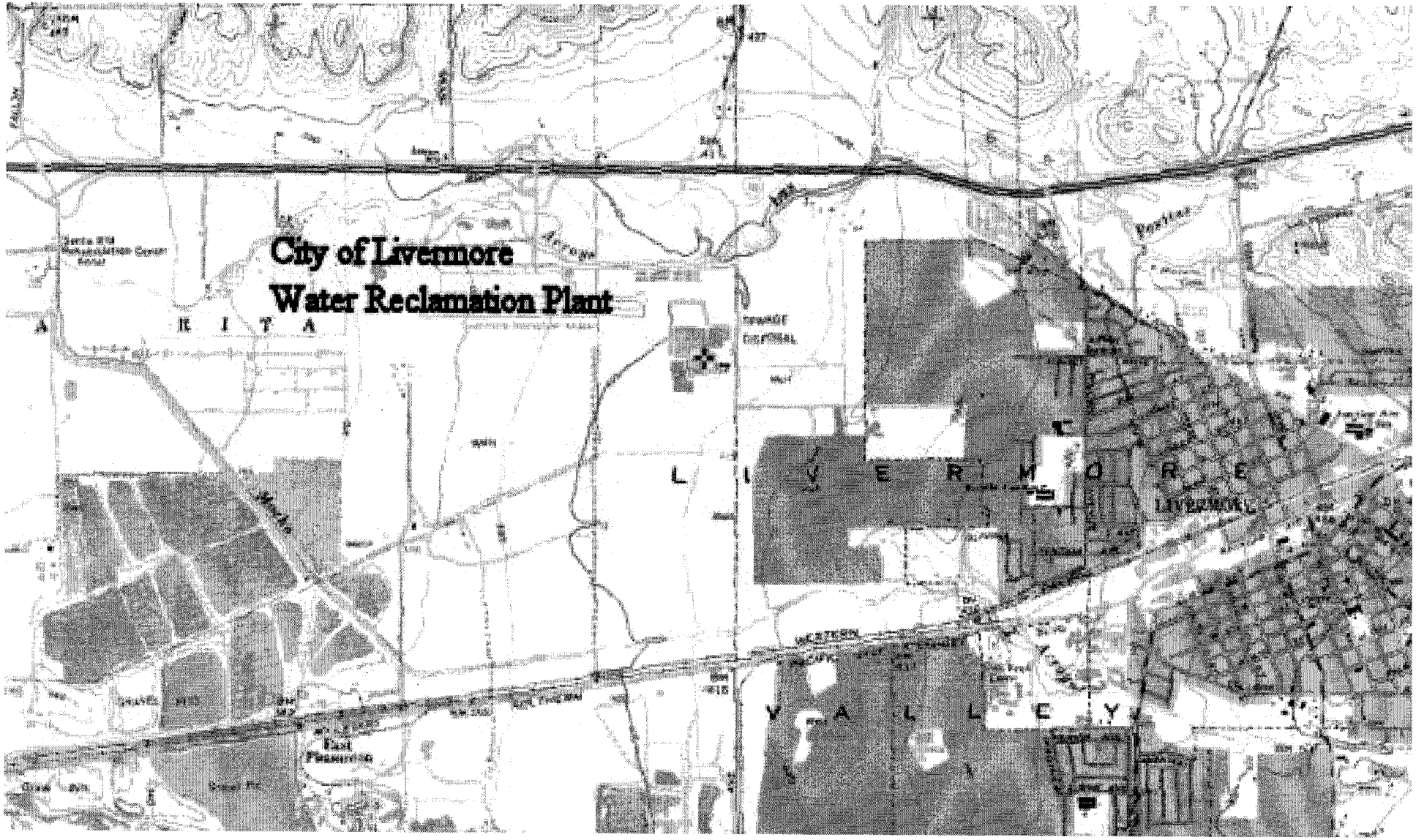
Instantaneous Maximum Effluent Limitation: the highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation: the lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

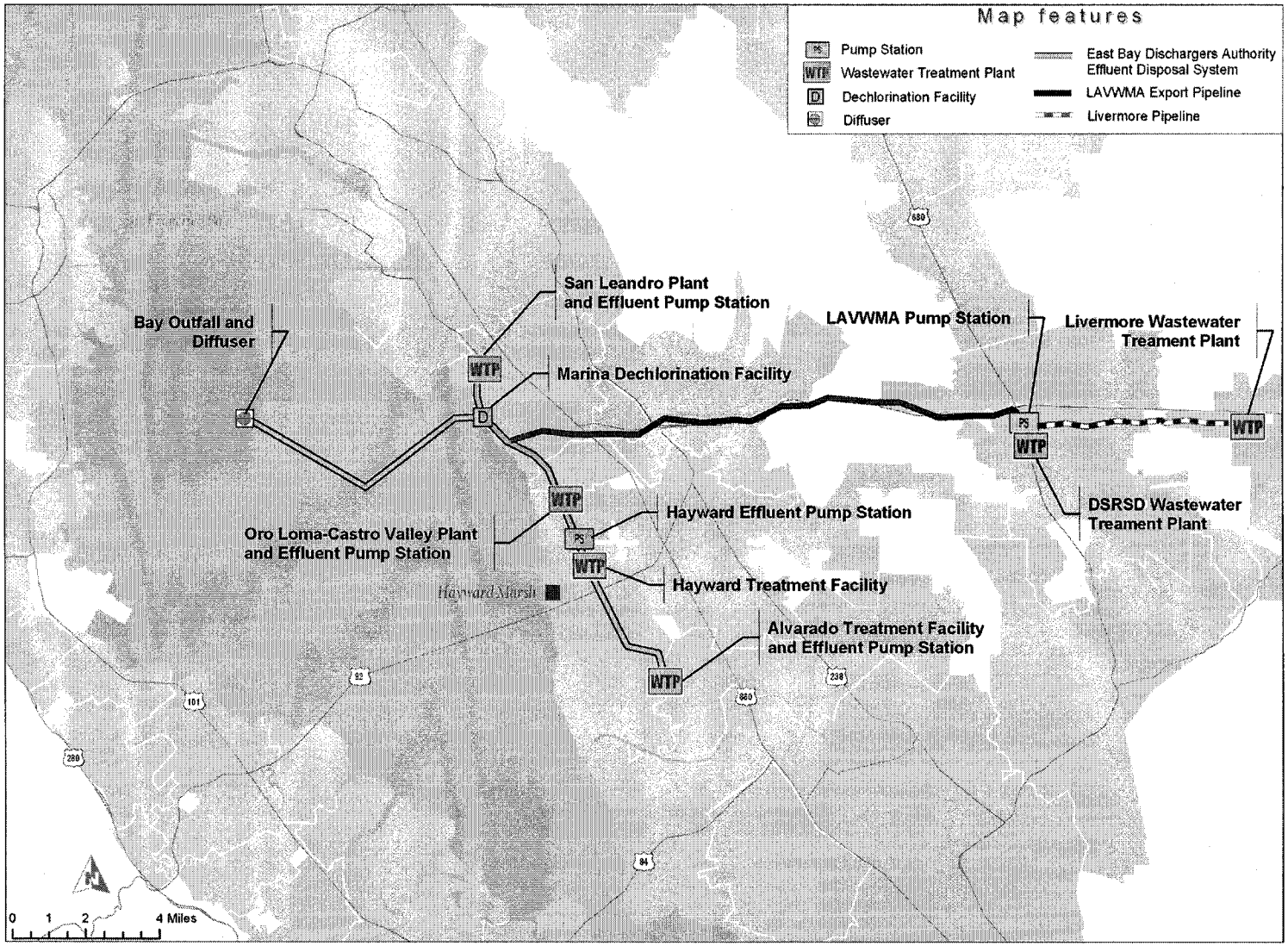
Maximum Daily Effluent Limitation (MDEL): the highest allowable daily discharge of a pollutant.

Reporting Level (RL) is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

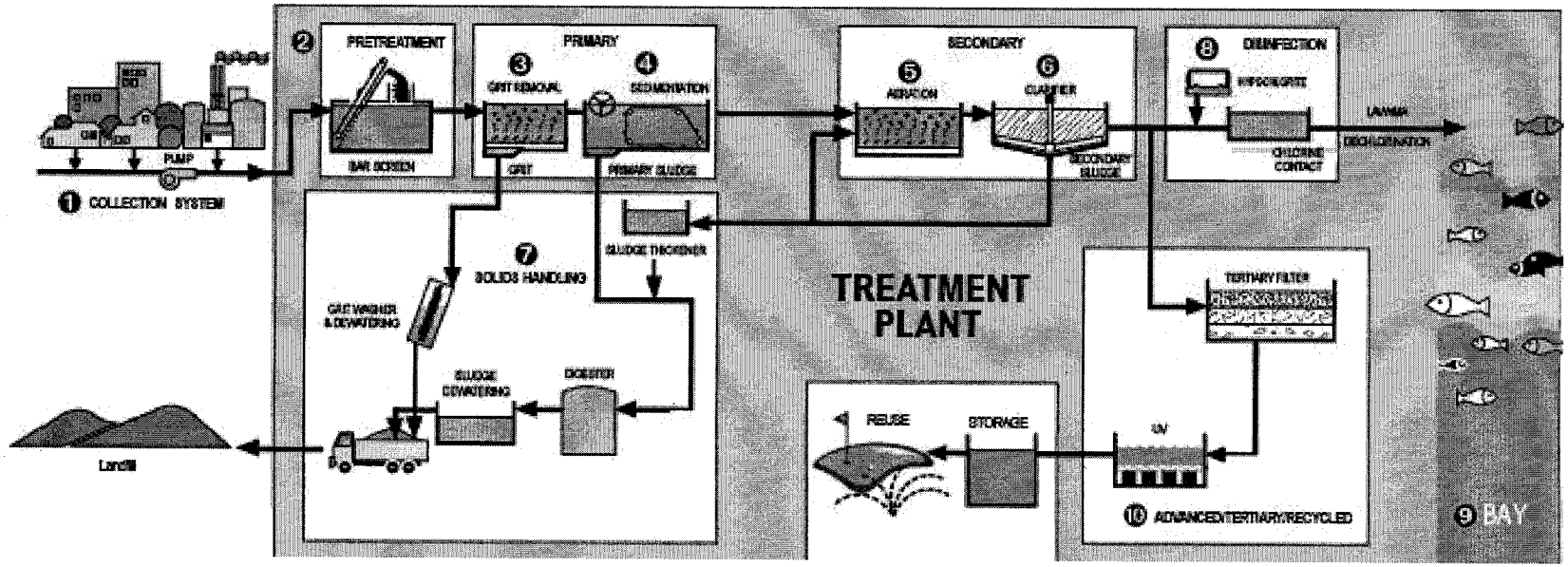
ATTACHMENT B1 – LOCATION MAP



ATTACHMENT B2 – FLOW SCHEMATIC



ATTACHMENT C – PLANT SCHEMATIC



ATTACHMENT D – FEDERAL STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or denial of a permit renewal application [*40 CFR §122.41(a)*].

2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not been modified to incorporate the requirement [*40 CFR §122.41(a)(1)*].

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order [*40 CFR §122.41(c)*].

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment [*40 CFR §122.41(d)*].

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order [*40 CFR §122.41(e)*].

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges [*40 CFR §122.41(g)*].

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations [*40 CFR §122.5(c)*].

F. Inspection and Entry

The Discharger shall allow the Regional Water Quality Control Board (Regional Water Board), State Water Resources Control Board (State Water Board), United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to [*40 CFR §122.41(i)*] [*CWC 13383(c)*]:

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order [*40 CFR §122.41(i)(1)*];

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order [*40 CFR §122.41(i)(2)*];

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order [*40 CFR §122.41(i)(3)*];

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the CWC, any substances or parameters at any location [*40 CFR §122.41(i)(4)*].

G. Bypass

1. Definitions

   a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility [*40 CFR §122.41(m)(1)(i)*].

   b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production [*40 CFR §122.41(m)(1)(ii)*].

2. Bypass not exceeding limitations – The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3 and I.G.5 below [*40 CFR §122.41(m)(2)*].

3. Prohibition of bypass – Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless [*40 CFR §122.41(m)(4)(i)*]:

a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage [*40 CFR §122.41(m)(4)(A)*];

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance [*40 CFR §122.41(m)(4)(B)*]; and

c. The Discharger submitted notice to the Regional Water Board as required under Standard Provision – Permit Compliance I.G.5 below [*40 CFR §122.41(m)(4)(C)*].

4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above [*40 CFR §122.41(m)(4)(ii)*].

5. Notice

a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass [*40 CFR §122.41(m)(3)(i)*].

b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below [*40 CFR §122.41(m)(3)(ii)*].

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation [*40 CFR §122.41(n)(1)*].

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph H.2 of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review [*40 CFR §122.41(n)(2)*].

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that [*40 CFR §122.41(n)(3)*]:

a. An upset occurred and that the Discharger can identify the cause(s) of the upset [*40 CFR §122.41(n)(3)(i)*];

b. The permitted facility was, at the time, being properly operated [*40 CFR §122.41(n)(3)(i)*];

c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b [*40 CFR §122.41(n)(3)(iii)*]; and

d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above [*40 CFR §122.41(n)(3)(iv)*].

3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof [*40 CFR §122.41(n)(4)*].

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition [*40 CFR §122.41(f)*].

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit [*40 CFR §122.41(b)*].

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the CWC [*40 CFR §122.41(l)(3)*] [*40 CFR §122.61*].

III. STANDARD PROVISIONS – MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [*40 CFR §122.41(j)(1)*].

B. Monitoring results must be conducted according to test procedures under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503 unless other test procedures have been specified in this Order [*40 CFR §122.41(j)(4)*] [*40 CFR §122.44(i)(1)(iv)*].

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time [*40 CFR §122.41(j)(2)*].

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements [*40 CFR §122.41(j)(3)(i)*];
2. The individual(s) who performed the sampling or measurements [*40 CFR §122.41(j)(3)(ii)*];
3. The date(s) analyses were performed [*40 CFR §122.41(j)(3)(iii)*];
4. The individual(s) who performed the analyses [*40 CFR §122.41(j)(3)(iv)*];
5. The analytical techniques or methods used [*40 CFR §122.41(j)(3)(v)*]; and
6. The results of such analyses [*40 CFR §122.41(j)(3)(vi)*].

C. Claims of confidentiality for the following information will be denied [*40 CFR §122.7(b)*]:

1. The name and address of any permit applicant or Discharger [*40 CFR §122.7(b)(1)*]; and
2. Permit applications and attachments, permits and effluent data [*40 CFR §122.7(b)(2)*].

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, State Water Board, or USEPA within a reasonable time, any information which the Regional Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order [*40 CFR §122.41(h)*] [*CWC 13267*].

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with paragraph (2.) and (3.) of this provision [*40 CFR §122.41(k)*].

2. All permit applications shall be signed as follows:

   a. For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures [*40 CFR §122.22(a)(1)*];

   b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively [*40 CFR §122.22(a)(2)*]; or

   c. For a municipality, State, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA) [*40 CFR §122.22(a)(3)*].

3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in paragraph (b) of this provision, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in paragraph (2.) of this provision [*40 CFR §122.22(b)(1)*];

   b. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company (a duly authorized representative may thus be

either a named individual or any individual occupying a named position) [*40 CFR §122.22(b)(2)*]; and

c. The written authorization is submitted to the Regional Water Board, State Water Board, or USEPA [*40 CFR §122.22(b)(3)*].

4. If an authorization under paragraph (3.) of this provision is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (3.) of this provision must be submitted to the Regional Water Board, State Water Board, or USEPA prior to or together with any reports, information, or applications, to be signed by an authorized representative [40 CFR §122.22(c)].

5. Any person signing a document under paragraph (2.) or (3.) of this provision shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations" [*40 CFR §122.22(d)*].

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program in this Order [*40 CFR §122.41(l)(4)*].

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices [*40 CFR §122.41(l)(4)(i)*].

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board [*40 CFR §122.41(l)(4)(ii)*].

4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order [*40 CFR §122.41(l)(4)(iii)*].

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date [*40 CFR §122.41(l)(5)*].

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance [*40 CFR §122.41(l)(6)(i)*].

2. The following shall be included as information that must be reported within 24 hours under this paragraph [*40 CFR §122.41(l)(6)(ii)*]:

   a. Any unanticipated bypass that exceeds any effluent limitation in this Order [*40 CFR §122.41(l)(6)(ii)(A)*].

   b. Any upset that exceeds any effluent limitation in this Order [*40 CFR §122.41(l)(6)(ii)(B)*].

   c. Violation of a maximum daily discharge limitation for any of the pollutants listed in this Order to be reported within 24 hours [*40 CFR §122.41(l)(6)(ii)(C)*].

3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours [*40 CFR §122.41(l)(6)(iii)*].

F. Planned Changes

The Discharger shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when [*40 CFR §122.41(l)(1)*]:

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR §122.29(b) [*40 CFR §122.41(l)(1)(i)*]; or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in this Order nor to notification requirements under 40 CFR Part

122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1) [*40 CFR §122.41(l)(1)(ii)*].

3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan [*40 CFR §122.41(l)(1)(iii)*].

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements [*40 CFR §122.41(l)(2)]*.

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting E.3, E.4, and E.5 at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E [*40 CFR §122.41(l)(7)*].

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information [*40 CFR §122.41(l)(8)*].

VI. Standard Provisions – Enforcement

A. The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $25,000 per day for each violation. The CWA provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal

penalties of not more than $100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the Clean Water Act, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions [*40 CFR §122.41(a)(2)*] [*CWC 13385 and 13387*].

B. Any person may be assessed an administrative penalty by the Regional Water Board for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000 [*40 CFR §122.41(a)(3)*].

C. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both [*40 CFR §122.41(j)(5)*].

D. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both [*40 CFR §122.41(k)(2)*].

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural dischargers shall notify the Regional Water Board as soon as they know or have reason to believe [*40 CFR §122.42(a)*]:

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" [*40 CFR §122.42(a)(1)*]:

a. 100 micrograms per liter (µg/L) [*40 CFR §122.42(a)(1)(i)*];

b. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony [*40 CFR §122.42(a)(1)(ii)*];

c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [*40 CFR §122.42(a)(1)(iii)*]; or

d. The level established by the Regional Water Board in accordance with 40 CFR §122.44(f) [*40 CFR §122.42(a)(1)(iv)*].

2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" [*40 CFR §122.42(a)(2)*]:

a. 500 micrograms per liter (µg/L) [*40 CFR §122.42(a)(2)(i)*];

b. 1 milligram per liter (mg/L) for antimony [*40 CFR §122.42(a)(2)(ii)*];

c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [*40 CFR §122.42(a)(2)(iii)*]; or

d. The level established by the Regional Water Board in accordance with 40 CFR §122.44(f) [*40 CFR §122.42(a)(2)(iv)*].

B. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Regional Water Board of the following [*40 CFR §122.42(b)*]:

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to Sections 301 or 306 of the CWA if it were directly discharging those pollutants [*40 CFR §122.42(b)(1)*]; and

2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order [*40 CFR §122.42(b)(2)*].

3. Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW [*40 CFR §122.42(b)(3)*].

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

Table of Contents

List of Tables

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (CFR) at 40 CFR §122.48 requires that all NPDES permits specify monitoring and reporting requirements. CWC sections 13267 and 13383 also authorize the Regional Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements that implement the Federal and State regulations.

I. GENERAL MONITORING PROVISIONS

A. The Discharger shall comply with the MRP for this Order as adopted by the Regional Water Board, and with all of the requirements contained in Self-Monitoring Program, Part A, adopted August 1993 (SMP, **Attachment G**). The MRP and SMP may be amended by the Executive Officer pursuant to USEPA regulations 40 CFR122.62, 122.63, and 124.5. If any discrepancies exist between the MRP and SMP, the MRP prevails.

B. Sampling is required during the entire year when discharging. All analyses shall be conducted using current USEPA methods, or that have been approved by the USEPA Regional Administrator pursuant to 40 CFR 136.4 and 40 CFR 136.5, or equivalent methods that are commercially and reasonably available, and that provide quantification of sampling parameters and constituents sufficient to evaluate compliance with applicable effluent limits and to perform reasonable potential analysis. Equivalent methods must be more sensitive than those specified in 40 CFR 136, must be specified in the permit, and must be approved for use by the Executive Officer, following consultation with the State Water Resources Control Board's Quality Assurance Program.

C. Sampling and analysis of additional constituents is required pursuant to Table 1 of the Regional Water Board's August 6, 2001 Letter titled Requirement for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy (**Attachment G**).

D. *Minimum Levels.* For compliance and reasonable potential monitoring, analyses shall be conducted using the commercially available and reasonably achievable detection levels that are lower than the WQOs/WQC or the effluent limitations, whichever is lower. The objective is to provide quantification of constituents sufficient to allow evaluation of observed concentrations with respect to the Minimum Levels given below. All Minimum Levels are expressed as µg/L approximately equal to parts per billion (ppb).

Table E-1 lists the test method the Discharger may use for compliance and reasonable potential monitoring for the pollutants with effluent limits.

Table E-1. Test Methods and Minimum Levels for Pollutants with Reasonable Potential

CTR #	Constituent	Types of Analytical Methods [a] Minimum Levels (µg/L)											
		GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGF AA	HYD RIDE	CVAA	DCP
6.	Copper								0.5	2			
8.	Mercury [b]								0.5			0.2	
9.	Nickel						5		1	5			
13.	Zinc					20		20	1	10			
14.	Cyanide				5								
117.	Heptachlor	0.01											

Footnotes for Table E-1:

[a] Analytical Methods / Laboratory techniques are defined as follows:
GC = Gas Chromatography;
GCMS = Gas Chromatography/Mass Spectrometry;
Color = Colorimetric;
GFAA = Graphite Furnace Atomic Absorption;
ICPMS = Inductively Coupled Plasma/Mass Spectrometry;
SPGFAA = Stabilized Platform Graphite Furnace Atomic Absorption (i.e. EPA 200.9); and
CVAF = Cold Vapor Atomic Fluorescence.

[b] Use ultra-clean sampling (USEPA 1669) to the maximum extent practicable, and ultra-clean analytical methods (USEPA 1631) for mercury monitoring.

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Table E-2. Monitoring Station Locations

Type of Sampling Location	Monitoring Location Name	Monitoring Location Description
Influent (City of Livermore)	M-INF-E	At any point in the treatment plant's headworks at which all waste tributary to that plant is present and preceding any phase of treatment or sidestream.
Effluent (Common Outfall)	M-001	At any point in the EBDA Common Outfall at which all waste tributary to that outfall is present (formerly station E-1).
Effluent (City of Livermore)	M-002E	At any point in treatment plant at which adequate disinfection has taken place and just prior to where Livermore transfers control of its effluent to LAVWMA facilities. (Formerly station E-2)
Biosolids (City of Livermore)	B-001E	Sludge monitoring at the treatment Plant.

III. INFLUENT MONITORING REQUIREMENTS

The Discharger shall monitor the influent at M-INF-E as follows:

Table E-3. Plant Influent Monitoring

Parameter	Units[2]	Minimum Sampling Frequency	Required Analytical Test Method
		C-24	
Flow rate [1]	MGD	Cont/D	
$CBOD_5$, 20°C	mg/L	2/W	
Total Suspended Solids	mg/L	4/W	
Copper	µg/L	Q	
Mercury	µg/L	Q	
Nickel	µg/L	Q	
Zinc	µg/L	Q	
Cyanide	µg/L	Q	
Priority Pollutants	In accordance with Pretreatment Requirements (Section VII.A of the MRP)		

Footnote for Table E-3:

(1) For influent flows, the following information shall also be reported monthly:
Daily: Total Daily Flow Volume (MG)
Daily: Daily Average Flow (MGD)
Monthly: Monthly Average Flow (MGD)
Monthly: Maximum Daily Flow (MGD)
Monthly: Minimum Daily Flow (MGD)
Monthly: Total Flow Volume (MG)

(2) For flows, mg = million gallons; for concentration mg/L = milligrams per liter, and is applicable to this MRP.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location – M-001

1. The Discharger shall monitor the discharge to EBDA Common Outfall at M-001 as follows:

Table E-4. EBDA Common Outfall Effluent Monitoring (M-001)

Parameter	Units	Minimum Sampling Frequency [1]		Required Analytical Test Method
		G	C-24	
Flow Rate [2]	MGD		Cont/D	
$CBOD_5$, 20°C [3]	mg/L		2/W	
Total Suspended Solids [3]	mg/L		4/W	
Oil and Grease [4]	mg/L		Q	

Parameter	Units	Minimum Sampling Frequency [1]		Required Analytical Test Method
		G	C-24	
pH [5]	Units	2/W		
Chlorine Residual [6]	mg/L		Cont.	
Fecal Coliform	MPN/100mL	2/W		
Temperature	°C	2/W		
Dissolved Oxygen	mg/L	2/W		
Ammonia Nitrogen	mg/L		2/M	
Acute Toxicity [7]	% survival		M	
Chronic Toxicity [8]	TU_C		Q	
Copper	µg/L		M	
Mercury [9]	µg/L		M	
Nickel	µg/L		M	
Zinc	µg/L		M	
Cyanide	µg/L	M		
Heptachlor	µg/L	2/Y		
Other metals (antimony, arsenic, beryllium, cadmium, chromium, lead, selenium, silver, and thallium)	µg/L	Q or according to Pretreatment Program requirement [10]		According to the August 6, 2001 Letter
All other priority pollutants, including dioxins and tributyltin	µg/L or as appropriate	1/Y or according to Pretreatment Program requirement [10]		According to the August 6, 2001 Letter

Footnotes for Table E-4:

(1) Testing conducted under the pretreatment and reuse programs may be used to satisfy the monitoring requirements of this Order. All analyses shall be performed using current U.S. EPA methods, as specified in 40 CFR Part 136. Metals units are expressed as total recoverable metals.

(2) Flow Monitoring:

For effluent flows, the following information shall also be reported monthly:
Daily: Total Daily Flow Volume (MG)
Daily: Daily Average Flow (MGD)
Monthly: Monthly Average Flow (MGD)
Monthly: Maximum Daily Flow (MGD)
Monthly: Minimum Daily Flow (MGD)
Monthly: Total Flow Volume (MG)

(3) The percent removal for BOD and TSS shall be reported for each calendar month in accordance with Effluent Limitation IV.2.

(4) Each oil & grease sampling event shall consist of a composite sample comprised of three grab samples taken at equal intervals during the sampling date, with each grab sample being collected in a glass container. Each glass container used for sample collection or mixing shall be thoroughly rinsed with solvent rinsings as soon as possible after use, and the solvent rinsings shall be added to the composite sample for extraction and analysis.

(5) If pH is monitored continuously; the minimum and maximum pH values for each day shall be reported in monthly self-monitoring reports.

(6) Chlorine residual: The Discharger may record discrete readings from the continuous monitoring every hour on the hour, and report, on a daily basis, the maximum concentration observed following dechlorination. Total chlorine dosage (kg/day) shall be recorded on a daily basis (individual plants only).

(7) Acute bioassay test shall be performed in accordance with Section V.A of this MRP.

(8) Critical Life Stage Toxicity Test shall be performed and reported in accordance with the Chronic Toxicity Requirements specified in Sections V.B of the MRP.

(9) Mercury: The Discharger may, at its option, sample effluent mercury either as grab or as 24-hour composite samples. Use ultra-clean sampling (U.S. EPA 1669) to the maximum extent practicable and ultra-clean analytical methods (U.S. EPA 1631) for mercury monitoring. The Discharger may use alternative methods if that alternative method has an ML of 0.5 ng/L or less, and approval is obtained from the Executive Officer prior to conducting the monitoring.

(10) For the same pollutants, the sampling frequencies shall be the higher ones under this table or under the pretreatment program sampling required in VII.A. of this MRP (Table E-6). Pretreatment program monitoring can be used to satisfy part of these sampling requirements.

B. Monitoring Locations – M-002E

The Discharger shall monitor effluent as follows:

Table E-5. Plant Effluent Monitoring (M-002E)

Parameter	Units	Minimum Sampling Frequency[1]		Required Analytical Test Method
		G	C-24	
Flow Rate [2]	MGD		Cont/D	
$CBOD_5$, 20°C [3]	mg/L		2/W	
Total Suspended Solids [3]	mg/L		4/W	
Oil and Grease [4]	mg/L		Q	
Chlorine Residual [6]	mg/L		Cont.	
Fecal Coliform	MPN/100 ml	2/W		
pH [5]	Units	2/W		
Copper	µg/L		M	
Mercury [9]	µg/L		M	
Nickel	µg/L		M	

Parameter	Units	Minimum Sampling Frequency[1]		Required Analytical Test Method
		G	C-24	
Zinc	µg/L		M	
Cyanide	µg/L	M		
Heptachlor	µg/L	2/Y		
Other metals (antimony, arsenic, beryllium, cadmium, chromium, lead, selenium, silver, and thallium)	µg/L	Q or according to Pretreatment Program requirement [10]		According to the August 6, 2001 Letter
All other priority pollutants, including dioxins and tributyltin	µg/L	1/Y or according to Pretreatment Program requirement [10]		According to the August 6, 2001 Letter

Footnotes for Table E-5 are the same as the respective ones in Table E-4 above.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

The Discharger shall monitor acute and chronic toxicity at M-001 as follows:

A. Whole Effluent Acute Toxicity

1. Compliance with the acute toxicity effluent limitations of this Order shall be evaluated by measuring survival of test organisms exposed to 96-hour continuous flow-through bioassays.

2. Test organisms shall be rainbow trout unless specified otherwise in writing by the Executive Officer.

3. All bioassays shall be performed according to the most up-to-date protocols in 40 CFR Part 136, currently in "Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms,"5th Edition.

4. If specific identifiable substances in the discharge can be demonstrated by the Discharger as being rapidly rendered harmless upon discharge to the receiving water, compliance with the acute toxicity limit may be determined after the test samples are adjusted to remove the influence of those substances. Written approval from the Executive Officer must be obtained to authorize such an adjustment.

5. Effluent used for fish bioassays must be dechlorinated prior to testing. Monitoring of the bioassay water shall include, on a daily basis, the following parameters: pH, dissolved oxygen, ammonia (if toxicity is observed), temperature, hardness, and alkalinity. These results shall be reported. If a violation of acute toxicity requirements occurs or if the control fish survival rate is less than 90 percent, the bioassay test shall be restarted with new batches of fish and shall continue back to back until compliance is demonstrated.

B. Whole Effluent Chronic Toxicity

1. Chronic Toxicity Monitoring Requirements

   a. *Sampling*. The Discharger shall collect 24-hour composite samples of the effluent at M-001 in accordance with the frequency specified in the table above, for critical life stage toxicity testing as indicated below. For toxicity tests requiring renewals, 24-hour composite samples collected on consecutive days are required.

   b. *Test Species*. *Pimephales promelas*. The Executive Officer may change to another test species if data suggest that another test species is more sensitive to the discharge.

   c. *Methodology*. Sample collection, handling and preservation shall be in accordance with USEPA protocols. In addition, bioassays shall be conducted in compliance with the most recently promulgated test methods, as shown in **Appendix E-1.** These are "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms," currently third edition (EPA-821-R-02-014), and "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms," currently fourth Edition (EPA-821-R-02-013), with exceptions granted the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP).

   d. *Dilution Series*. The Discharger shall conduct tests at 50%, 25%, 10%, 5%, and 2.5%. The "%" represents percent effluent as discharged. Samples may be buffered using the biological buffer MOPS (3-(N-Morpholino)propanesulfonic Acid) to control pH drift and ammonia toxicity caused by increasing pH during the test.

2. Chronic Toxicity Reporting Requirements

   a. *Routine Reporting*. Toxicity test results for the current reporting period shall include, at a minimum, for each test:

      i. Sample date(s)
      ii. Test initiation date
      iii. Test species
      iv. End point values for each dilution (e.g. number of young, growth rate, percent survival)
      v. NOEC value(s) in percent effluent
      vi. IC15, IC25, IC40, and IC50 values (or EC15, EC25 ... etc.) in percent effluent
      vii. TUc values (100/NOEC, 100/IC25, or 100/EC25)
      viii. Mean percent mortality (±s.d.) after 96 hours in 100% effluent (if applicable)
      ix. NOEC and LOEC values for reference toxicant test(s)
      x. IC50 or EC50 value(s) for reference toxicant test(s)
      xi. Available water quality measurements for each test (pH, D.O., temperature, conductivity, hardness, salinity, ammonia)

b. *Compliance Summary.* The results of the chronic toxicity testing shall be provided in the next self-monitoring report and shall include a summary table of chronic toxicity data from at least eleven of the most recent samples. The information in the table shall include items listed above under 2.a, specifically, item numbers i, iii, v, vi (IC25 or EC25), vii, and viii.

3. Chronic Toxicity Reduction Evaluation (TRE)

a. *Generic TRE Work Plan.* To be prepared for responding to toxicity events, the Discharger shall prepare a generic TRE work plan within 90 days of the effective date of this Order. The Discharger shall review and update the work plan as necessary to remain current and applicable to the discharge and discharge facilities.

b. *Specific TRE Work Plan.* Within 30 days of exceeding either trigger for accelerated monitoring, the Discharge shall submit to the Regional Water Board a TRE work plan, which should be the generic work plan revised as appropriate for this toxicity event after consideration of available discharge data.

c. *Initiate TRE.* Within 30 days of the date of completion of the accelerated monitoring tests observed to exceed either trigger, the Discharger shall initiate a TRE in accordance with a TRE work plan that incorporates any and all comments from the Executive Officer.

d. The TRE shall be specific to the discharge and be in accordance with current technical guidance and reference materials, including USEPA guidance materials. The TRE shall be conducted as a tiered evaluation process, such as summarized below:

i. Tier 1 consists of basic data collection (routine and accelerated monitoring).
ii. Tier 2 consists of evaluation of optimization of the treatment process, including operation practices and in-plant process chemicals.
iii. Tier 3 consists of a toxicity identification evaluation (TIE).
iv. Tier 4 consists of evaluation of options for additional effluent treatment processes.
v. Tier 5 consists of evaluation of options for modifications of in-plant treatment processes.
vi. Tier 6 consists of implementation of selected toxicity control measures, and follow-up monitoring and confirmation of implementation success.

e. The TRE may be ended at any stage if monitoring finds there is no longer consistent toxicity (complying with Effluent Limitations Section IV.6.a).

f. The objective of the TIE shall be to identify the substance or combination of substances causing the observed toxicity. All reasonable efforts using currently available TIE methodologies shall be employed.

g. As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the source(s) and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with chronic toxicity evaluation parameters.

h. Many recommended TRE elements parallel required or recommended efforts of source control, pollution prevention and storm water control programs. TRE efforts should be coordinated with such efforts. To prevent duplication of efforts, evidence of complying with requirements or recommended efforts of such programs may be acceptable to comply with TRE requirements.

i. The Regional Water Board recognizes that chronic toxicity may be episodic and identification of causes of and reduction of sources of chronic toxicity may not be successful in all cases. Consideration of enforcement action by the Regional Water Board will be based in part on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

VI. RECEIVING WATER MONITORING

Receiving water monitoring is not required under this Order so long as the Discharger adequately supports the Regional Monitoring Program.

VII. OTHER MONITORING REQUIREMENTS

A. Pretreatment Requirements

The Discharger shall comply with the pretreatment requirements as specified in Table E-6 for both influent (M-INF-E), effluent (M-002E), and biosolids (B-001E):

Table E-6. Pretreatment Program Monitoring Requirements

Constituents	Sample Locations and Frequency				Required Test Methods
	Influent M-INF-E	Effluent M-001	Effluent M-002E	Biosolids (B-001E)	
VOC [1]	2/Y	2/Y	2/Y	2/Y	624
BNA [1]	2/Y	2/Y	2/Y	2/Y	625
Hexavalent Chromium [2]	M	M	M	2/Y	Standard Methods 3500
Metals [3]	M	M	M	2/Y	GFAA, ICP, ICP-MS
Mercury [4]	M	M	M	2/Y	EPA 245, 1631
Cyanide [4]	M	M	M	2/Y	Standard Methods 4500-CN^- C or I

Legend:
M = once each month
Q = once each quarter
2/Y= each calendar year (at about 6 month intervals, once in the dry season, once in the wet season)
VOC = volatile organic compounds
BNA = base/neutrals and acids extractable organic compounds

Footnotes for Table E-6:

[1] GC/MS methods used must be able to quantify to an equivalent level as applicable GC methods (EPA 601, 602, 603, 604, 606).

[2] Total chromium may be substituted for hexavalent chromium at the Discharger's discretion.

[3] The parameters are arsenic, cadmium, selenium, copper, lead, mercury, nickel, silver, zinc, and total chromium (if the Discharger elects to substitute total chromium for hexavalent chromium).

[4] Influent and effluent monitoring conducted per Tables E-3, E-4, and E-5 can be used to satisfy these pretreatment program sampling requirements and vice versa.

B. Biosolids Monitoring (B-001E)

The Discharger shall continue to analyze sludge on a semi-annual basis prior to disposal for priority pollutant metals and organics. See above Pretreatment Monitoring for specific requirements.

VIII. LEGEND FOR MRP TABLES

Types of Samples

C-24	=	composite sample, 24 hours (includes continuous sampling, such as flows)
C-X	=	composite sample, X hours
G	=	grab sample

Frequency of Sampling

Cont.	=	Continuous
Cont/D	=	Continuous monitoring & daily reporting
H	=	once each hour (at about hourly intervals)
W	=	once each week
2/W	=	twice each week
4/W	=	four times each week
M	=	once each month
Q	=	once each calendar quarter (at about three month intervals)
1/Y	=	once each calendar year
2/Y	=	twice each calendar year (at about 6 months intervals, once during dry season, once during wet season)

Parameter and Unit Abbreviations

CBOD	=	Carbonaceous Biochemical Oxygen Demand
D.O.	=	Dissolved Oxygen
Est V	=	Estimated Volume (gallons)
Metals	=	Multiple metals
PAHs	=	Polycyclic Aromatic Hydrocarbons
TSS	=	Total Suspended Solids
MGD	=	million gallons per day
mg/L	=	milligrams per liter
mL/L-hr	=	milliliters per liter, per hour
µg/L	=	micrograms per liter
ng/L	=	nanograms per liter, 1 ng/L= 10^{-3} µg/L
kg/d	=	kilograms per day
kg/mo	=	kilograms per month
MPN/100 mL	=	Most Probable Number per 100 milliliters

IX. MODIFICATIONS TO PART A OF SELF-MONITORING PROGRAM (ATTACHMENT G)

Modify Section F.4 as follows:

Self-Monitoring Reports

[Add the following to the beginning of the first paragraph]

For each calendar month, a self-monitoring report (SMR) shall be submitted to the Regional Water Board in accordance with the requirements listed in Self-Monitoring Program, Part A. The purpose of the report is to document treatment performance, effluent quality and compliance with waste discharge requirements prescribed by this Order, as demonstrated by the monitoring program data and the Discharger's operation practices.

[And add at the end of Section F.4 the following:]

g. If the Discharger wishes to invalidate any measurement, the letter of transmittal will include a formal request to invalidate the measurement; the original measurement in question, the reason for invalidating the measurement, all relevant documentation that supports the invalidation (e.g., laboratory sheet, log entry, test results, etc.), and discussion of the corrective actions taken or planned (with a time schedule for completion), to prevent recurrence of the sampling or measurement problem. The invalidation of a measurement requires the approval of Water Board staff and will be based solely on the documentation submitted at that time.

h. Reporting Data in Electronic Format

The Discharger has the option to submit all monitoring results in an electronic reporting format approved by the Executive Officer. If the Discharger chooses to submit SMRs electronically, the following shall apply:

1) Reporting Method: The Discharger shall submit SMRs electronically via the process approved by the Executive Officer in a letter dated December 17, 1999, Official Implementation of Electronic Reporting System (ERS) and in the Progress Report letter dated December 17, 2000, or in a subsequently approved format that the Permit has been modified to include.

2) Monthly or Quarterly Reporting Requirements: For each reporting period (monthly or quarterly as specified in SMP Part B), an electronic SMR shall be submitted to the Regional Water Board in accordance with Section F.4.a-g. above. However, until USEPA approves the electronic signature or other signature technologies, Dischargers that are using the ERS must submit a hard copy of the original transmittal letter, an ERS printout of the data sheet, a violation report, and a receipt of the electronic transmittal.

3) Annual Reporting Requirements: Dischargers who have submitted data using the ERS for at least one calendar year are exempt from submitting an annual report electronically, but a hard copy of the annual report shall be submitted according to Section F.5 below.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachments D and G) related to monitoring, reporting, and recordkeeping, except as otherwise specified below.

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this Order, the State or Regional Water Board may notify the Discharger to electronically submit self-monitoring reports. Until such notification is given, the Discharger shall submit self-monitoring reports in accordance with the requirements described below.

2. The Discharger shall submit monthly Self-Monitoring Reports including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order for each calendar month. Monthly SMRs shall be due on the 30th day following the end of each calendar month, covering samples collected during that calendar month; Annual reports shall be due on February 1 following each calendar year.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule as given in Table E-7:

Table E-7. Monitoring Period

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period
Continuous	Day after permit effective date	All
1 / day	Day after permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.
1 / week 2 / week 3 / week	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday
1 / month	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1st day of calendar month through last day of calendar month
1 / quarter	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31
1 / year	Closest of May 1 or November 1 following (or on) permit effective date	Alternate between once during November 1 through April 30 (one year), and once during May 1 through October 31 (following year)
2 / year	Closest of May 1 or November 1 following (or on) permit effective date	One during November 1 through April 30 One during May 1 through October 31
Each Occurrence	Anytime during the discharge event or as soon as possible after aware of the event	At a time which sampling can characterize the discharge event

4. The Dischargers shall report with each sample result the applicable Minimum Level (ML) or Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR §136.

   The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

   a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

   b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

      For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of

data quality may be percent accuracy (+ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND. In the ERS, the MDL is to be reported and a qualifier of "<" may be reported.

d. The Discharger shall instruct laboratories to establish calibration standards so that the RL value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. The Discharger shall not use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

5. The Dischargers shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations.

6. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

7. SMRs must be submitted to the Regional Water Board, signed and certified as required by the standard provisions (Attachment D), to the address shown below:

   Executive Officer
   California Regional Water Quality Control Board
   San Francisco Bay Region
   1515 Clay Street, Suite 1400
   Oakland, CA 94612
   ATTN: NPDES Division

8. The Discharger has the option to submit all monitoring results in an electronic reporting format approved by the Executive Officer. The Electronic Reporting System (ERS) format includes, but is not limited to, a transmittal letter, summary of violation details and corrective actions, and transmittal receipt. If there are any discrepancies between the ERS requirements and the "hard copy" requirements listed in the MRP, then the approved ERS requirements supersede.

C. Discharge Monitoring Reports (DMRs)

1. As described in Section IX.B.1 above, at any time during the term of this permit, the State or Regional Water Board may notify the discharger to electronically submit self-monitoring reports. Until such notification is given, the Discharger shall submit discharge monitoring reports (DMRs) in accordance with the requirements described below.

2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharge shall submit the original DMR and one copy of the DMR to the address listed below:

State Water Resources Control Board
Discharge Monitoring Report Processing Center
Post Office Box 671
Sacramento, CA 95812

3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated or modified cannot be accepted.

Appendix E-1

CHRONIC TOXICITY

DEFINITION OF TERMS AND SCREENING PHASE REQUIREMENTS

I. Definition of Terms

A. No observed effect level (NOEL) for compliance determination is equal to IC_{25} or EC_{25}. If the IC_{25} or EC_{25} cannot be statistically determined, the NOEL shall be equal to the NOEC derived using hypothesis testing.

B. Effective concentration (EC) is a point estimate of the toxicant concentration that would cause an adverse effect on a quantal, "all or nothing," response (such as death, immobilization, or serious incapacitation) in a given percent of the test organisms. If the effect is death or immobility, the term lethal concentration (LC) may be used. EC values may be calculated using point estimation techniques such as probit, logit, and Spearman-Karber. EC_{25} is the concentration of toxicant (in percent effluent) that causes a response in 25 percent of the test organisms.

C. Inhibition concentration (IC) is a point estimate of the toxicant concentration that would cause a given percent reduction in a nonlethal, nonquantal biological measurement, such as growth. For example, an IC_{25} is the estimated concentration of toxicant that would cause a 25 percent reduction in average young per female or growth. IC values may be calculated using a linear interpolation method such as USEPA's Bootstrap Procedure.

D. No observed effect concentration (NOEC) is the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specific time of observation. It is determined using hypothesis testing.

II. Chronic Toxicity Screening Phase Requirements

A. The Discharger shall perform screening phase monitoring:

1. Subsequent to any significant change in the nature of the effluent discharged through changes in sources or treatment, except those changes resulting from reductions in pollutant concentrations attributable to source control efforts, or

2. Prior to permit reissuance. Screening phase monitoring data shall be included in the NPDES permit application for reissuance. The information shall be as recent as possible, but may be based on screening phase monitoring conducted within 5 years before the permit expiration date.

B. Design of the screening phase shall, at a minimum, consist of the following elements:

1. Use of test species specified in **Appendix E-2**, attached, and use of the protocols referenced in those tables, or as approved by the Executive Officer.

2. Two stages:
   a. Stage 1 shall consist of a minimum of one battery of tests conducted concurrently. Selection of the type of test species and minimum number of tests shall be based on **Appendix E-2** (attached).
   b. Stage 2 shall consist of a minimum of two test batteries conducted at a monthly frequency using the three most sensitive species based on the Stage 1 test results and as approved by the Executive Officer.

3. Appropriate controls.

4. Concurrent reference toxicant tests.

5. Dilution series 100%, 50%, 25%, 10%, 5%, 0 %, where "%" is percent effluent as discharged, or as otherwise approved the Executive Officer.

C. The Discharger shall submit a screening phase proposal acceptable to the Executive Officer. The proposal shall address each of the elements listed above. If within 30 days, the Executive Officer does not comment, the Discharge shall commence with screening phase monitoring.

Appendix E-2

SUMMARY OF TOXICITY TEST SPECIES REQUIREMENTS

Critical Life Stage Toxicity Tests for Estuarine Waters

Species	(Scientific Name)	Effect	Test Duration	Reference
Alga	*(Skeletonema costatum)* *(Thalassiosira pseudonana)*	Growth rate	4 days	1
Red alga	*(Champia parvula)*	Number of cystocarps	7–9 days	3
Giant kelp	*(Macrocystis pyrifera)*	Percent germination; germ tube length	48 hours	2
Abalone	*(Haliotis rufescens)*	Abnormal shell development	48 hours	2
Oyster Mussel	*(Crassostrea gigas)* *(Mytilus edulis)*	Abnormal shell development; percent survival	48 hours	2
Echinoderms - Urchins Sand dollar	*(Strongylocentrotus purpuratus, S. franciscanus)* *(Dendraster excentricus)*	Percent fertilization	1 hour	2
Shrimp	*(Mysidopsis bahia)*	Percent survival; growth	7 days	3
Shrimp	*(Holmesimysis costata)*	Percent survival; growth	7 days	2
Topsmelt	*(Atherinops affinis)*	Percent survival; growth	7 days	2
Silversides	*(Menidia beryllina)*	Larval growth rate; percent survival	7 days	3

Toxicity Test References:

1. American Society for Testing Materials (ASTM). 1990. Standard Guide for Conducting Static 96-Hour Toxicity Tests with Microalgae. Procedure E 1218-90. ASTM, Philadelphia, PA.
2. Short-term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine and Estuarine Organisms. EPA/600/R-95/136. August 1995.

3. Short-term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to Marine and Estuarine Organisms. EPA/600/4-90/003. July 1994.

Critical Life Stage Toxicity Tests for Fresh Waters

Species	(Scientific Name)	Effect	Test Duration	Reference
Fathead minnow	*(Pimephales promelas)*	Survival; growth rate	7 days	4
Water flea	*(Ceriodaphnia dubia)*	Survival; number of young	7 days	4
Alga	*(Selenastrum capricornutum)*	Cell division rate	4 days	4

Toxicity Test Reference:

4. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, third edition. EPA/600/4-91/002. July 1994.

Toxicity Test Requirements for Stage One Screening Phase

Requirements	Receiving Water Characteristics		
	Discharges to Coast	Discharges to San Francisco Bay[2]	
	Ocean	Marine/Estuarine	Freshwater
Taxonomic diversity	1 plant 1 invertebrate 1 fish	1 plant 1 invertebrate 1 fish	1 plant 1 invertebrate 1 fish
Number of tests of each salinity type: Freshwater[1] Marine/Estuarine	0 4	1 or 2 3 or 4	3 0
Total number of tests	4	5	3

[1] The freshwater species may be substituted with marine species if:

(a) The salinity of the effluent is above 1 part per thousand (ppt) greater than 95 percent of the time, or

(b) The ionic strength (TDS or conductivity) of the effluent at the test concentration used to determine compliance is documented to be toxic to the test species.

[2] (a) Marine/Estuarine refers to receiving water salinities greater than 1 ppt at least 95 percent of the time during a normal water year.

(b) Fresh refers to receiving water with salinities less than 1 ppt at least 95 percent of the time during a normal water year.

ATTACHMENT F – FACT SHEET

Table of Contents

List of Tables

ATTACHMENT F – FACT SHEET

As described in Section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Facility.

Table F-1. Facility Information

WDID	2 019033001
Dischargers	City of Livermore Livermore-Amador Valley Water Management Agency (LAVWMA) East Bay Dischargers Authority (EBDA)
Name of Facility	City of Livermore Water Reclamation Plant and its collection system
Facility Address	101 W. Jack London Blvd. Livermore, CA 94551 Alameda County
Facility Contact, Title and Phone	Darren Greenwood, Water Resources Manager, (925) 960-8100
Authorized Person to Sign and Submit Reports	Darren Greenwood, Water Resources Manager, (925) 960-8100
Mailing Address	Same as Facility
Billing Address	Same as Facility
Type of Facility	POTW
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	Y City of Livermore
Reclamation Requirements	Regulated under separate Waste Discharge Requirements (WDRs)
Facility Permitted Flow	8.5 MGD (average dry weather design capacity) Proposed 9.4 MGD (future average dry weather design capacity) possibly around 2010, or 11.1 MGD (ultimate capacity). Both subject to completion of studies demonstrating reliability and compliance with applicable standards.
Facility Design Flow	8.5 MGD (current average dry weather design flow) 9.4 MGD (proposed future average dry weather design flow) 11.1 MGD (ultimate average dry weather design flow). 12.4 MGD (LAVWMA contractual peak wet weather flow)
Watershed	San Francisco Bay
Receiving Water	Lower San Francisco Bay
Receiving Water Type	Enclosed Bay, Marine

A. The City of Livermore is the owner and operator of the Livermore Water Reclamation Plant.

B. The Livermore Water Reclamation Plant discharges wastewater through the EBDA Joint Outfall to Lower San Francisco Bay, a water of the United States, and is currently regulated by Order No. 00-089 which was adopted on August 16, 2000, and expired on August 16, 2005

(previous Order). The terms of the previous Order automatically continued in effect until this Order becomes effective.

C. The City of Livermore filed a report of waste discharge and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on February 11, 2005.

II. FACILITY DESCRIPTION

A. Description of Wastewater and Biosolids Treatment or Controls

1. The City of Livermore owns and operates the Livermore Water Reclamation Plant. Treatment system consists of grit removal, primary clarification, activated sludge, secondary clarification, and disinfection. Sludge is anaerobically digested, dewatered with belt filter presses, and beneficially reused for alternative daily cover the Vasco Road Landfill. The City of Livermore discharges treated effluent to the Livermore Interceptor that transports flow to the LAVWMA export pump station where it combines with DSRSD's treated effluent. The combined wastewaters flow to two flow-equalization basins, and are pumped via LAVWMA's pipeline to the East Bay Dischargers Authority (EBDA) system. EBDA transports LAVWMA treated wastewater jointly with the treated wastewater from its member agencies to its dechlorination station near the San Leandro Marina (Marina Dechlorination Facility) and thence to its deepwater outfall in Lower San Francisco Bay west of the Oakland Airport. The outfall's diffuser is located 37,000 feet from shore; it discharges 23.5 feet below the surface (MLLW); and it is designed to provide minimum initial dilution of greater than 10:1 at all times. EBDA is responsible for the combined transport, dechlorination, and discharge of LAVWMA's treated wastewater by contractual agreement.

2. LAVWMA is a joint powers agency created in 1974 for wastewater management planning for the service areas of the City of Livermore and DSRSD. By contractual agreement, DSRSD is responsible for operating and maintaining LAVWMA's export pump station and pipeline facilities and for performing and submitting the self-monitoring requirements for the LAVWMA facilities. LAVWMA is responsible for transporting effluent from its member agencies to the EBDA system. LAVWMA is not empowered to take actions to secure member agency compliance with requirements.

3. Both EBDA and LAVWMA are Joint Exercise of Powers Agencies (JEPAs) which exist under JEPA agreements to operate treated wastewater transport, treatment, and disposal facilities. Since LAVWMA and its member agencies are not signatories to the EBDA JEPA, the EBDA/LAVWMA agreement empowers EBDA to monitor discharges by LAVWMA member agencies into the EBDA system and requires LAVWMA, as a condition of continuing service, to comply with all requirements prescribed by the Regional Water Board, in its member agencies' individual permits, except residual chlorine, for which EBDA will be responsible. LAVWMA is responsible for transporting the chlorinated effluent from its member agencies to the EBDA system.

4. For the purposes of this Order, compliance with the effluent limitations will be determined at the combined effluent of the four EBDA plants and two LAVWMA plants, except as noted. Regional Water Board enforcement actions for violations of effluent limitations that pertain only to the combined effluent will be applied to EBDA, and EBDA will be responsible for responding to enforcement actions in conjunction with its JEPA and the EBDA/LAVWMA agreement.

   The combined effluent compliance point is consistent with each Order issued by this Board since 1979 for these facilities.

   In addition, Section 20 of the EBDA JEPA provides the following legal authority:

   "Section 20. Failure to Meet Discharge Requirements

   The Authority shall cause the combined effluent of all Agencies as well as the receiving water of the combined discharge to be monitored to determine whether or not Federal and/or State discharge requirements are being met. In addition, the Authority shall cause the effluent of each Agency to be monitored. If the combined effluent of all Agencies at the point of ultimate discharge into the receiving water fails to meet discharge requirements, the Agency or Agencies responsible for the violations shall be solely responsible for any fines levied or criminal sanctions imposed. In this regard, the Agency or Agencies responsible for the violations shall hold harmless the Authority and the other non-violating Agencies from all liability and/or damages incurred by said Authority and/or Agencies as a result of a cease and desist order or court injunction from any State or Federal agency restricting construction within the jurisdictional limits of said Authority or Agency. In the event two or more Agencies are responsible for failure of the combined effluent to meet discharge requirements as above provided, the Agencies responsible for the violation shall be jointly and severally responsible to the Authority and to the other non-violating Agencies. Upon notification of such violation, the Agency or Agencies shall take prompt, corrective action as necessary to meet said discharge requirements.

   If any Agency fails to take such action, the Authority by unanimous vote of the Commission (excluding those members of the Commission who are representatives of the Agency or Agencies who are in violation of the discharge requirements) may elect to do either one or both of the following:

   (a) Have undertaken at the cost and expense of the violating Agency or Agencies the operation of existing facilities or construction and operation of additional treatment facilities as necessary to meet said discharge requirements.

(b) Impose a prohibition of additional connections to the collection system of the Agency or Agencies in violation.

Nothing in this Section shall preclude one or more Agencies from providing additional levels of treatment to insure meeting waste discharge requirements for the combined effluent. In the event that one or more Agencies are obligated to provide additional levels of treatment to meet waste discharge requirements for the combined effluent, all Agencies requiring the additional levels of treatment shall participate in the costs of such treatment based on their relative contribution of waste characteristics to be treated and the costs of providing such treatment."

However, it is the Regional Water Board's expectation that each EBDA member agency maintains and operates its treatment facility to fully meet technology based Secondary Treatment Standards at each facility. As such, the Regional Water Board reserves its discretion to enforce against individual EBDA member agencies for failure to meet those technology limits.

5. As used herein, "Common Outfall" means the EBDA outfall; "Combined Discharge" refers to the waste stream at any point where all wastes tributary to that outfall are present; and "Individual Treatment Plant" means a treatment facility operated by a member agency of either EBDA or LAVWMA.

6. The existing permitted average dry weather design capacity is 8.5 MGD. The City Livermore has proposed 11.1 MGD for ultimate design capacity.

B. Storm Water

a. *Regulation.* Federal Regulations for storm water discharges were promulgated by the USEPA on November 19, 1990. The regulations [40 CFR Parts 122, 123, and 124] require specific categories of industrial activity (industrial storm water) to obtain an NPDES permit and to implement Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to control pollutants in industrial storm water discharges.

b. *Exemption from Coverage under Statewide Industrial Storm Water General Permit.* The State Board adopted a statewide NPDES permit for storm water discharges associated with industrial activities (NPDES General Permit CAS000001). The Discharger is not required to be covered under the General Permit because all of the storm water captured within the treatment plant storm drain system is directed to the headworks and treated to the standards contained in the Discharger's permit.

C. Discharge Points and Receiving Waters

The location of the EBDA Common Outfall and its receiving water are shown in Table F-2 below.

Table F-2. Outfall Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	POTW Effluent	37°, 41', 40" N	122 °, 17', 42" W	Lower San Francisco Bay

Lower San Francisco Bay is located in the South Bay Basin watershed management area, between the Dumbarton Bridge and the San Francisco-Oakland Bay Bridge.

D. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

Effluent limitations contained in Order No. 00-089 for discharges from the EBDA Common Outfall and representative monitoring data are as shown in Tables F-3 and F-4 below. Priority organic and inorganic pollutant data from 2002-2004 are shown in **Appendix F-1** of the Fact Sheet.

Table F-3. Historic Conventional Substances Effluent Limitations and Monitoring Data from Livermore Facility (CBOD, TSS, coliform as determined at station E-2 of previous permit, other parameters as determined at EBDA Common Outfall)

Parameter	(units)	Effluent Limitations			Monitoring Data	
		Monthly Average	Weekly Average	Instantaneous Maximum	Mean Discharge	Maximum Discharge
$CBOD_5$	mg/L	25	40	--	5.90	7.00
TSS	mg/L	30	45	--	6.90	13.0
Settleable Matter	ml/L-hr	--	--	0.2	0.0	0.15
Total Chlorine Residual	mg/L	--	--	0.0	0.0	0.05
pH		6.0 to 9.0			6.0 (min)	8.1
Fecal coliform	MPN/100 ml	--	--	--	2.00	2

Table F-4. Historic Toxic Substances Effluent Limitations and Monitoring Data for EBDA Common Outfall

Parameter	Units	Water Quality-Based Effluent Limits (WQBELs)		Interim Limits		Monitoring Data (From 7/00 To 12/04)	
		Daily Maximum	Monthly Average	Daily Maximum	Monthly Average	Mean Discharge[1]	Maximum Discharge
Copper	µg/L			23		12.1	18.4
Mercury	µg/L				0.21	0.0205	0.0490
Lead	µg/L	56				1.7	6.2
Nickel	µg/L			21		6.5	19
Silver	µg/L	23				0.54	1.4
Selenium	µg/L	50				0.53	1.4
Zinc	µg/L	580				48	205
Cyanide	µg/L			21		3.5	6.2

Parameter	Units	Water Quality-Based Effluent Limits (WQBELs)		Interim Limits		Monitoring Data (From 7/00 To 12/04)	
		Daily Maximum	Monthly Average	Daily Maximum	Monthly Average	Mean Discharge[1]	Maximum Discharge
Benzo(a)-Anthracene	µg/L	0.98	0.49		0.65	0.0059	0.0070 (DNQ)
Bis(2-Ethylhexyl) Phthalate	µg/L			14		3.1	16[2]
Chrysene	µg/L	0.98	0.49		5.9	0.010	0.034 (DNQ)
Dibenzo(a,h) Anthracene	µg/L	0.98	0.49			< 0.0054	< 0.0054
Indeno(1,2,3-cd)Pyrene	µg/L	0.98	0.49		1.0	< 0.0045	< 0.0045

Footnotes:

(1) Mean Discharge values include Non-detected and Detected but Not Quantified (DNQ) values in the computation. DNQs were assumed to be at the reported values. For ND data the MDL value was used in the calculation.

(2) Analyte detected in method blank.

E. Compliance Summary

1. **Compliance with Numeric Effluent Limits.** No exceedances of numeric effluent limits were observed during the permit term. For Bis(2-ethylhexyl)Phthalate, a value of 16 µg/L was observed above the effluent limit of 14 µg/L ,however, the analyte was also observed in the method blank at a value > 10 µg/L, which renders the data point invalid. Overall, this Discharger has had a very strong record of compliance over the last four and a half years.

2. **Compliance with Permit Provisions.** A list of special activities required in the provisions for Order No. 00-089, and the status of completion, is shown in Table F-5 below.

Table F-5. Status of Special Activities in Provisions for Order No. 00-089

Provision No.	Description of Activity	Status of Completion
2	Compliance with Acute Toxicity Effluent Limitation	All acute toxicity tests completed during the permit term were in compliance
4	Screening Study for Chronic Toxicity	Completed
6	Dioxin Special Study	Completed
8	Special Study for Benzo(a)Anthracene, Chrysene, Dibenzo(a,b) Anthracene, Indeno(1,2,3-cd) Pyrene	Completed

3. **Compliance with Submittal of Self-Monitoring Reports.** The Discharger submitted all Self-Monitoring Reports on or before the due date during the term of Order No. 00-089.

F. Planned Changes

1. **Purpose.** The Discharger is currently implementing modification and improvement of its wastewater treatment facilities. The purpose of the improvements is to ensure continued

adequate and reliable treatment and management of current and anticipated future wastewater flows.

2. **New Plant and Process.**

Future Capacity Increase. The City of Livermore Water Reclamation Plant is currently permitted to accept an average dry weather flow of up to 8.5 MGD. The LAVWMA Joint Exercise of Powers Agreement (JEPA) limits the City of Livermore to an influent average dry weather flow of 11.1 MGD. The City participated with EBDA and Dublin San Ramon Services District in the preparation of an anti-degradation analysis. To remain consistent with the LAVWMA JEPA limit, the analysis modeled a maximum Livermore influent flow of 11.1 MGD. Based on the analysis, this increased flow would not result in degradation of receiving waters, or adverse impacts on beneficial uses of receiving waters. The anti-degradation analysis was submitted to the Regional Water Board in July 2005, and amended in June 2006.

The City of Livermore adopted a General Plan Update on February 4, 2004, to guide development and conservation in the City through year 2025. Projected wastewater flow at build-out of the current General Plan is 9.4 MGD. To identify improvements needed, and the timing of these improvements to accommodate build-out of the current General Plan, the City prepared a Wastewater Disposal Master Plan in March 2005 and a Water Reclamation Plant Master Plan Update in March 2006. Based on the anti-degradation analysis, the current permitted average dry weather flow capacity of 8.5 MGD may be increased up to 11.1 MGD by written approval of the Executive Officer in accordance with the conditions stated in Provisions C.5(a) through C.5(c) of the Order. However, future general plan and wastewater master plan updates will be prepared by the City before any wastewater flow capacity increases above 9.4 MGD.

Collection System Hydraulic Analysis. The City of Livermore (City) owns and maintains a wastewater collection system that conveys wastewater to the City-owned Livermore Water Reclamation Plant (LWRP). The collection system consists of 280 miles of sewer pipelines and two pump stations. It serves the area within Livermore's Urban Growth Boundary (UGB), and the Ruby Hill residential development in the City of Pleasanton, located outside the UGB.

The City prepared a Sewer Master Plan in 2004 which identifies existing and future capacity constraints in the collection system as a result of the projected development through build out of the community. The Sewer Master Plan identifies the wastewater collection system improvements that will be required to convey ultimate peak wet weather hourly flows. These required improvement projects are fully funded in the City's current Capital Improvement Program Budget through a combination of development fees and user charges.

Flow monitoring data, water billing information, land use information, and utility mapping information was used to develop a hydraulic model of the sewer system for existing conditions and future build-out conditions. The hydraulic modeling program for the sewer

system is H20Map Sewer, a product of MWH Soft, Inc. H20Map Sewer was developed specifically to determine the amount of available capacity in the wastewater collection system. The program was used to identify hydraulic constraints in the existing collection system for current and future peak flow conditions.

A capital improvement program (CIP) was developed to address existing hydraulic capacity problems in the City's sewer system, and to provide additional hydraulic capacity to serve future development. The recommended CIP includes projects to provide pipeline and pumping station capacity for ultimate peak wet weather hourly flow and to eliminate hydraulic bottlenecks throughout the collection system. Overall, the sewer collections system is well sized for existing and future conditions. The total estimated cost of all recommended collection system improvements for the existing system through future build out is $9.6 million.

The City performed an update to its Sewer Connection Fee Study in 2005 to ensure adequate funding from development fees to support collection system improvements associated with future system expansion. The City also provides annual funding from sewer service charges for CIP projects to address existing collection system deficiencies. The combination of development fees and user charges provides full funding for all collection system CIP projects.

Disposal System Hydraulic Analysis All wastewater conveyed by the collection system is treated at the LWRP. A 15 million gallon holding basin at the plant is used to equalize flow throughout the day, to provide wet-weather storage, and to provide emergency storage when necessary. Treated wastewater is discharged to the Livermore Amador Valley Water Management Agency (LAVWMA) effluent disposal system. Treated wastewater flows by gravity through the Livermore Interceptor disposal pipeline to the LAVWMA pumping station located in Pleasanton, where it combines with treated wastewater from the Dublin San Ramon Services District (DSRSD) Regional Wastewater Treatment Plant. The combined flow and is pumped over the Dublin grade into the East Bay Discharges Authority (EBDA) combined effluent pipeline and deepwater outfall to San Francisco Bay.

The City prepared a Wastewater Disposal Master Plan in 2005 which identifies required wet weather storage and disposal capacity improvements to handle a wet weather event with a 20-year return interval through build out of the City's General Plan. Long-term influent wastewater simulation was analyzed using MOUSE, a commercially available software package used to simulate hydrology, hydraulics, water quality, and sediment transport in urban drainage and sewer systems. MOUSE was used to route hourly influent wastewater flows through the LWRP treatment process and storage facility to the LAVWMA pipeline over a long-term simulation based on 47-years of hourly rainfall data.

The Wastewater Disposal Master Plan report concludes that the City's existing LAVWMA contractual disposal capacity of 12.4 MGD together with the existing storage volume in the LWRP Emergency Holding Basin is adequate to handle a 20-year wet weather event through build out of the General Plan. The only major disposal improvement project identified involves increasing the capacity of the Livermore Interceptor pipeline between

the LWRP and LAVWMA pumping station in Pleasanton. Project design for a low lift pump station is underway and construction should be completed by 2008 to provide the required increase in disposal capacity to accommodate a 20-year storm event.

Wet Weather Flow Analysis Historical wastewater flows, rainfall records, and recent wet weather flow monitoring in the Livermore collection system were used to project future wet weather flows in both the 2004 Sewer Master Plan and 2005 Wastewater Disposal Master Plan. Typically, large rainfall events can double or triple daily wastewater flows in a collection system. However, all past data indicate that Livermore's collection system has low wet weather infiltration and inflow. The largest rainfall events in the past year have only increased daily influent by about 50%. Daily influent during a major storm event on December 16, 2002, rated at a 25 year storm based on 6 hour intensity, was approximately 10 million gallons compared to daily dry weather average of 6.5 million gallons.

The Sewer Master Plan added estimated peak hourly wet weather flows to peak diurnal dry weather flows to size pipes and pump stations in the collection system. An analysis of historical data indicated that peak hourly flows increase by up to 8 MGD during the largest wet weather events. The study projects that as the tributary area of the collection system expands peak wet weather hourly flows will increase up to 11 MGD in the future. Again, these are relatively low infiltration and inflow rates compared to many other systems. Flow monitoring was conducted at five locations in the City's collection system between February and May 1998 as part of the July 1999 West Weather Phase IV Report by Carollo Engineers. The report calculated a wet weather flow rate of 500 gallons per day per inch-diameter-mile of sewer pipe in the Livermore system. The report states that according to EPA (43/9-75-021) this places the Livermore collection system in the "low" category for Rainfall Dependent Infiltration and Inflow (RDI/I). The wet weather flow rate of neighboring Dublin San Ramon Services District collection system was calculated at 1,000 gallons per day per inch-diameter-mile of sewer pipe which ranks in the 'moderate" category for RDI/I. Due to the low level of infiltration and inflow observed, the City currently has no CIP projects specifically targeted at reducing RDI/I.

Water Conservation and Recycling The City of Livermore provides wastewater collection and treatment services to the area within the City's Urban Growth Boundary (UGB), and the Ruby Hill residential development in the City of Pleasanton, located outside the UGB. Secondary treated effluent from the Livermore Water Reclamation Plant is discharged to LAVWMA for conveyance to EBDA and discharge into the San Francisco Bay. Livermore Municipal Water, a utility that is part of the City of Livermore, provides potable water service to approximately one-third of the City. The balance of the City receives potable water service from the California Water Service Company. Both Livermore Municipal Water and the California Water Service Company implement water conservation programs to encourage their customers to minimize potable water consumption and waste. The water conservation programs are described in the Livermore Municipal Water 2005 Urban Water Management Plan, and the June 2004 California Water Service Company Urban Water Management Plan for the Livermore District. Both Livermore Municipal Water and the California Water Service Company have designated

Water Conservation Coordinators who oversee implementation of applicable Demand Management Measures.

The City of Livermore also implements a water recycling program that is managed by Livermore Municipal Water. The Water Reuse Program is regulated by RWQCB Order 96-011, General Water Reuse Requirements for Municipal Wastewater and Water Agencies, and the State of California Water Recycling Criteria in Title 22 of the California Code of Regulations. Approximately 10 percent of the influent flow to the Livermore Water Reclamation Plant is treated to meet the Title 22 standards for disinfected tertiary recycled water. Recycled water is delivered to individual approved sites within the City's designated recycled water use area. Updated water recycling program information is provided to the RWB in the Annual Water Recycling Report as required by Order 96-011.

3. **Environmental Impact of New Wastewater Treatment Plant.** Appropriate environmental impacts analysis will be conducted as needed prior to implementation of planned treatment system improvements for treatment plant design capacity increases above the currently permitted 8.5 MGD ADWF.

4. **Zone 7 Water Agency Demineralization and Reject Disposal Project.** Alameda County Flood and Control and Water Conservation District (Zone 7 Water Agency, or Zone 7) serves as the overall water quality management agency for the Alameda Creek Watershed north of the Niles area of Fremont and has the primary responsibility for managing the Livermore-Amador Valley's surface and groundwater resources. Zone 7 developed a Salt Management Plan (plan) in 1998 to address the issues of salt accumulation and to identify potential salt management strategies to protect groundwater quality. The plan was developed in part in accordance with Regional Water Board Master Water Recycling Permit Order No. 93-159, as a condition for allowing increased use of recycled water without adversely impacting the main groundwater basin. The plan was approved by the Regional Water Board Executive Officer on September 24, 2004. A major component of the approved plan was construction of groundwater demineralization facilities to offset a projected 6,000 tons/year of net salt loading to the main basin and accommodate increased use of recycled water.

   In order to address salt loading and delivered water hardness goals, Zone 7 has proposed to install two reverse osmosis (RO) facilities in phases to remove salts from approximately 15 MGD of groundwater. The facilities combined would produce approximately 3.2 MGD of RO reject that would be discharged to the DSRSD Export Pipeline. The RO reject would combine with the DSRSD effluent and be transported through LAVWMA and EBDA facilities and become part of the combined flow discharged to San Francisco Bay. An analysis of the RO reject has been included in the antidegradation analysis. In addition, the RO Reject stream has been included in the reasonable potential analysis for determination of constituents which require effluent limits.

   The RO reject will be introduced into DSRSD's wastewater treatment works through a dedicated sewer prior to the final DSRSD monitoring station, but following DSRSD's treatment and disinfection of municipal waste and diversion for reclamation. Though it is

more common for sources in the pretreatment program to be introduced upstream of treatment, DSRSD's plan is consistent with the Federal Part 403 pretreatment regulations. Total dissolved solids (TDS) in the RO reject have the potential to negatively affect the treatment of municipal waste and opportunities of treated wastewater for reclamation and recycling. This would compromise the purposes of the pretreatment program, which include avoiding interference with the treatment process and improving opportunities to recycle and reclaim wastewaters and biosolids, 40 CFR 403.2 (a) – (c). Additionally, DSRSD's approved pretreatment ordinance contains a definition of "treatment works" that tracks the definition in Clean Water Act section 212 (33 USC §1292 (A) and (B)), and is broader than that definition which authorizes DSRSD to cover Zone 7's discharge under its pretreatment program. In part , "Treatment Works" as defined by DSRSD ordinance includes "any other method or system for ... disposing of municipal waste." Therefore, the RO reject will be combined with DSRSD's municipal wastewater after treatment. DSRSD will authorize relief from individual local limits (e.g., TDS), as allowed under its approved pretreatment program, to permit the discharge of Zone 7 RO reject to its system, but such relief will not compromise DSRSD's ability to comply with the requirements of its NPDES permit. DSRSD's approved pretreatment program contains adequate authority to allow it to enforce this pretreatment permit. The Regional Water Board also retains the authority under 33 USC 1319 and 1342 to enforce this pretreatment permit.

Zone 7 and Livermore entered into the A*greement Between Zone 7 Water Agency and City of Livermore to Work Cooperatively on Projects of Mutual Benefit* on January 24, 2005 to affirm the agencies' commitment to cooperate on future groundwater demineralization, recycled water, and other mutually beneficial projects. Zone 7 could potentially discharge RO reject in a similar manner into the Livermore Interceptor and be regulated under equivalent existing authorities by the City of Livermore, as addressed in the Livermore NPDES permit application. This is not likely to occur during the term of this permit but may occur in the future depending on Zone 7 decisions regarding the need for and timing of additional demineralization capacity and where the facilities would need to be sited.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in the proposed Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order is issued pursuant to section 402 of the Federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and Chapter 5.5, Division 7 of the California Water Code (CWC). It shall serve as an NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4 of the CWC for discharges that are not subject to regulation under CWA section 402.

B. California Environmental Quality Act (CEQA)

This action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21100, et seq.) in accordance with Section 13389 of the CWC.

C. State and Federal Regulations, Policies, and Plans

1. Water Quality Control Plan

The Regional Water Board adopted a Water Quality Control Plan for the San Francisco Bay Basin (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan.

2. Thermal Plan

The State Water Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains WQOs for coastal and interstate surface waters as well as enclosed bays and estuaries.

3. National Toxics Rule (NTR) and California Toxics Rule (CTR)

USEPA adopted the NTR on December 22, 1992, which was amended on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR, which incorporated the NTR criteria that were applicable in California. The CTR was amended on February 13, 2001. These rules include water quality criteria (WQC) for priority pollutants and are applicable to this discharge.

4. State Implementation Policy

On March 2, 2000, State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Boards in their basin plans, with the exception of the provision on alternate test procedures for individual discharges that have been approved by USEPA Regional Administrator. The alternate test procedures provision was effective on May 22, 2000. The SIP became effective on May 18, 2000. The State Water Board subsequently amended the SIP on February 24, 2005, and the amendments became effective on July 31, 2005. The SIP includes procedures for determining the need for and calculating WQBELs and requires dischargers to submit data sufficient to do so. Requirements of This Order implement the SIP.

5. Alaska Rule.

On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes. (40

C.F.R. § 131.21; 65 Fed. Reg. 24641 (April 27, 2000).) Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA.

6. **Stringency of Requirements for Individual Pollutants.**
This Order contains restrictions on individual pollutants that are no more stringent than required by the federal CWA. Individual pollutant restrictions consist of technology-based restrictions and water quality-based effluent limitations. The technology-based effluent limitations consist of restrictions on Carbonaceous Biochemical Oxygen Demand (CBOD), Total Suspended Solids (TSS), Oil and Grease, pH, and chlorine residual. Restrictions on these pollutants are specified in federal regulations and have been in the Basin Plan since before May 30, 2000, as discussed in the attached Fact Sheet, **Attachment F**. The permit's technology-based pollutant restrictions are no more stringent than required by the CWA. Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to section 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to section 131.21(c)(1). The remaining water quality objectives and beneficial uses implemented by this Order (specifically Arsenic, Cadmium, Chromium (VI), Copper (freshwater), Lead, Nickel, Silver (1-hour), Zinc) were approved by USEPA on January 5, 2005, and are applicable water quality standards pursuant to section 131.21(c)(2). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.

7. **Antidegradation Policy**
Section 131.12 of 40 CFR requires that State water quality standards include an antidegradation policy consistent with the Federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16, which incorporates the requirements of the Federal antidegradation policy. Resolution 68-16 requires that existing water quality is maintained unless degradation is justified based on specific findings. The permitted discharge is consistent with the antidegradation provision of 40 CFR §131.12 and State Water Board Resolution 68-16, and the final limitations in this Order are in compliance with antidegradation requirements and meet the requirements of the SIP because these limits hold the Discharger to performance levels that will not cause or contribute to water quality impairment or further water quality degradation.

8. Anti-Backsliding Requirements

Sections 402(o)(2) and 303(d)(4) of the CWA and 40 CFR §122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. In this Order, all effluent limitations are at least as stringent as those in the previous Order.

9. Monitoring and Reporting Requirements

Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement Federal and State requirements. This MRP is provided in Attachment E of this Order. The MRP may be amended by the Executive Officer pursuant to USEPA regulation 40 CFR 122.62, 122.63, and 124.5.

10. Federal Water Pollution Control Act.

Water quality objectives (WQOs) and water quality criteria (WQC), effluent limitations, and calculations contained in this Order are also based on Sections 201 through 305, and 307 of The Federal Water Pollution Control Act, and amendments thereto, as applicable.

D. Impaired Water Bodies on CWA 303(d) List

On June 6, 2003, the USEPA approved a revised list of impaired water bodies prepared by the State (hereinafter referred to as the 303(d) list), prepared pursuant to provisions of Section 303(d) of the Federal CWA requiring identification of specific water bodies where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. Lower San Francisco Bay is listed as an impaired waterbody. The pollutants impairing Lower San Francisco Bay include chlordane, DDT, diazinon, dieldrin, dioxin compounds, exotic species, furan compounds, mercury, nickel, PCBs, dioxin-like PCBs, and selenium. The SIP requires final effluent limitations for all 303(d)-listed pollutants to be consistent with total maximum daily loads and associated waste load allocations.

1. Total Maximum Daily Loads

The Regional Water Board plans to adopt Total Maximum Daily Loads (TMDLs) for pollutants on the 303(d) list in Lower San Francisco Bay within the next ten years. Future review of the 303(d)-list for Lower San Francisco Bay may result in revision of the schedules or provide schedules for other pollutants.

2. Waste Load Allocations

The TMDLs will establish waste load allocations (WLAs) for point sources and load allocations (LAs) for non-point sources, and will result in achieving the water quality standards for the waterbodies. Final WQBELs for 303(d)-listed pollutants in this discharge will be based on WLAs contained in the respective TMDLs.

3. Implementation Strategy

The Regional Water Board's strategy to collect water quality data and to develop TMDLs is summarized below:

a. Data Collection. The Regional Water Board has given the dischargers the option to collectively assist in developing and implementing analytical techniques capable of detecting 303(d)-listed pollutants to at least their respective levels of concern or WQOs/WQC. This collective effort may include development of sample concentration techniques for approval by the USEPA. The Regional Water Board will require dischargers to characterize the pollutant loads from their facilities into the water-quality limited waterbodies. The results will be used in the development of TMDLs, and may be used to update or revise the 303(d) list or change the WQOs/WQC for the impaired waterbodies including Lower San Francisco Bay.

b. Funding Mechanism. The Regional Water Board has received, and anticipates continuing to receive, resources from Federal and State agencies for TMDL development. To ensure timely development of TMDLs, the Regional Water Board intends to supplement these resources by allocating development costs among dischargers through the RMP or other appropriate funding mechanisms.

E. Other Plans, Polices and Regulations

This Order is also based on the following plans, polices, and regulations:

1. The Federal *Water Pollution Control Act*, Sections 301 through 305, and 307, and amendments thereto, as applicable (CWA);

2. The State Water Board's March 2, 2000 *Policy for* the USEPA's May 18, 2000 *Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California* or CTR, 40 C.F.R. §131.38(b) and amendments,;

3. The USEPA's *Quality Criteria for Water* [EPA 440/5-86-001, 1986] and subsequent amendments (the USEPA Gold Book);

4. Applicable Federal Regulations [40 CFR §§ 122 and 131];

5. 40 CFR §131.36(b) and amendments [Federal Register Volume 60, Number 86, 4 May 1995, pages 22229-22237];

6. USEPA's December 10, 1998 National Recommended Water Quality Criteria compilation [Federal Register Vol. 63, No. 237, pp. 68354-68364];

7. USEPA's December 27, 2002 Revision of National Recommended Water Quality Criteria compilation [Federal Register Vol. 67, No. 249, pp. 79091-79095]; and

8. Guidance provided with State Water Board Orders remanding permits to the Regional Water Board for further consideration.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source discharges to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations; and other requirements in NPDES permits. There are two principal bases for effluent limitations: 1) 40 CFR §122.44(a) requires that permits include applicable technology-based limitations and standards; and 2) 40 CFR §122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where numeric water quality objectives have not been established, three options exist to protect water quality: 1) 40 CFR §122.44(d) specifies that where RP exists, WQBELs may be established using USEPA criteria guidance under CWA section 304(a); 2) proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information may be used; or 3) an indicator parameter may be established.

Several specific factors affecting the development of limitations and requirements in this Order are discussed as follows:

A. Discharge Prohibitions

1. **Discharge Prohibition III.A. (no discharge other than that described in this Order, and no discharges receiving less than 10:1 dilution)**: This prohibition is the same as in the previous permit. The first part of the prohibition is based on CWC Section 13260, which requires filing of a report of waste discharge (ROWD) before discharges can occur. The Discharger submitted a ROWD for the discharges described in this Order; therefore discharges not described in this Order are prohibited. The basis for the second part of the prohibition is two-fold. First, the Basin Plan prohibits discharges with constituents of concern not receiving a minimum 10:1 initial dilution (Chapter 4, Discharge Prohibition No. 1). Second, this Order grants a 10:1 dilution credit to for the discharge (see later sections). Some effluent limits are calculated based on this credit. As such, these limits would not be protective if the discharge did not achieve 10:1 dilution, therefore necessitating the prohibition.

2. **Discharge Prohibition III.B (no bypass or overflow of untreated or partially treated wastewaters**: This prohibition is based on the Basin Plan. The Basin Plan prohibits the discharge of partially treated and untreated wastes (Chapter 4, Discharge Prohibition No.15). This prohibition is based on general concepts contained in Sections 13260 through 13264 of the CWC that relate to the discharge of waste to State waters without filing for and being issued a permit. Under certain circumstances, as stated in 40 CFR §122.41(m), facilities may bypass waste streams to waters of the State in order to prevent loss of life, personal injury, or severe property damage, or if there were no feasible alternatives to the

bypass and the Discharger submitted notices of the anticipated bypass to waters of the State.

3. **Discharge Prohibition III.C. (average dry weather flow not to exceed dry weather design capacity)**: The 8.5 MGD treatment capacity prohibition is based on the historic and tested reliable treatment capacity of the Livermore Water Reclamation Plant. Exceedance of the treatment plants' average dry weather flow design capacity may result in lowering the reliability of achieving compliance with water quality requirements. The prohibition allows for an increase of up to 2.6 MGD subject to approval by the Executive Officer after the Discharger completes tasks as required by VI.C.2.c of the Order.

   This increase was the subject of an anti-degradation analysis completed in July 2005, and amended in June, 2006. This Antidegradation analysis addressed up to a total of 22 MGD of flow increase. Of this, 2.6 MGD would be from the City of Livermore.

   The flow increase would be in compliance with federal and state Antidegradation Policies. Because the Discharger discharges through the EBDA Common Outfall, the antidegradation analysis completed in June 2006 addressed the impacts from a combined flow increase of 22 MGD from all discharges to the outfall. This 22 MGD includes 2.6 MGD from the City of Livermore. Based on the modeling results in the analysis of the total 22 MGD flow increase, the resulting concentration of trace metals (except mercury) would be below applicable criteria by the time the plume reached the water surface, and changes in the concentration would not be measurable (ex. increase in copper concentration would be < 0.02 ug/l). Additionally, the 22 MGD would result in predicted incremental increases in mass discharges of trace metals by only 0.00058 to 0.15 percent. For mercury, though the predicted incremental increase is 0.050 percent, or about 0.0023 kg/yr, no actual increase will occur because this Order requires compliance with a mercury performance mass limit based recent discharge data, which will hold the discharge to current levels. Additionally, the Regional Water Board's draft TMDL for mercury proposes to require a 20 percent decrease from current levels by 2020. Therefore, based on the results of the antidegradation analysis, and the requirements imposed by this Order, the 22 MGD flow increase from the EBDA system, which includes the 2.6 MGD increase for the City of Livermore are insignificant.

4. **Discharge Prohibition III.D. (No sanitary sewer overflows (SSO) to waters of the United States)**: The Clean Water Act prohibits the discharge of wastewater to surface waters except as authorize under an NPDES permit. POTWs must achieve secondary treatment, at a minimum, and any more stringent limitations that are necessary to achieve water quality standards. (33U.S.C. §1311(b)(1)(B) and (C).) Thus, an SSO that results in the discharge of raw sewage, or sewage not meeting secondary treatment, to surface waters is prohibited under the Clean Water Act.

B. Technology-based Effluent Limitations

1. Scope and Authority

The Code of Federal Regulations (CFR) at 40 CFR §122.44(a) requires that permits include applicable technology-based limitations and standards. This Order includes technology-based effluent limitations based on Secondary Treatment Standards at 40 CFR §133. Permit effluent limitations for conventional pollutants are technology-based. Technology-based effluent limitations are put in place to ensure that full secondary treatment is achieved by the wastewater treatment facility, as required under 40 CFR §133.102. Effluent limitations for these conventional pollutants are defined by the Basin Plan, Table 4-2. Further, these conventional effluent limits are the same as those from the previous permit for the following constituents, except oil and grease:

- Carbonaceous Biochemical oxygen demand (CBOD),
- CBOD percent removal,
- Total suspended solids (TSS),
- TSS percent removal,
- pH,
- Oil and grease, and
- Total chlorine residual.

The settleable solids effluent limitations are no longer required per the 2004 Basin Plan amendment. The oil and grease effluent limitations are added as required by the Basin Plan.

2. Applicable Technology-Based Effluent Limitations

Technology-based effluent limitations are summarized below.

Table F-6. Summary of Technology-based Effluent Limitations

Parameter	Compliance Point	Units	Effluent Limitations				
			Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Carbonaceous Biochemical Oxygen Demand (CBOD)	M-002E	mg/L	25	40	--	--	--
Total Suspended Solids (TSS)	M-002E	mg/L	30	45	--	--	--
Oil and Grease	M-002E	mg/L	10	--	20	--	--
pH	M-002E	standard units	--	--	--	6.0	9.0
Total Chlorine Residual	M-001	mg/L	--	--	--	0.0	0.0

a. *CBOD.* This effluent limitation is unchanged from the previous permit, and is based on the Basin Plan (Chapter 4, Table 4-2).

b. *TSS.* This effluent limitation is unchanged from the previous permit, and is based on the Basin Plan (Chapter 4, Table 4-2).

c. *pH.* This effluent limitation is unchanged from the previous permit, and is based on the Basin Plan (Chapter 4, Table 4-2).

Pursuant to 40 CFR 401.17, pH effluent limitations under continuous monitoring, the Discharger shall be in compliance with the pH limitation specified herein, provided that both of the following conditions are satisfied: (i) The total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and (ii) No individual excursion from the range of pH values shall exceed 60 minutes.

d. *Oil and grease.* This effluent limitation is based on the Basin Plan (Chapter 4, Table 4-2).

e. *Total Chlorine Residual.* This effluent limitation is unchanged from the previous permit, and is based on the Basin Plan (Chapter 4, Table 4-2).

f. *CBOD and TSS Percent Removal* The average monthly percent removal of CBOD and TSS shall not be less than 85 percent. Demonstration of compliance for removal rates will be based upon concentrations, instead of loads as was in the previous permit, consistent with 40CFR 133.102.

g. *Fecal Coliform Bacteria.* The discharge from the EBDA Common Outfall at M-001, shall meet the following limits of bacteriological quality. The five day log mean fecal coliform density shall not exceed 500 MPN/100 mL, and the ninetieth percentile value shall not exceed 1,100 MPN/100 mL. This effluent limit is unchanged from the previous permit.

From July 1994 through June 1995, the Discharger studied the effect of reduced chlorine residual on fecal coliform numbers in the effluent and receiving waters. This study was conducted not only because chlorine is an expensive chemical in the treatment process, but also because it produces toxic byproducts in the environment. Receiving water monitoring data showed that the fecal coliform density in the receiving water was generally less than 2.0 MPN/100 mL when the effluent was discharged with a fecal coliform density of 500 MPN/100 mL. These results indicate that the fecal coliform densities in the effluent, if they remain below the current effluent limitation specified in the permit, are protective of beneficial uses in the vicinity of the outfall.

In addition, this result is supported by receiving water monitoring data collected starting as far back as 1986 through 2006, at four stations ranging from 0.15 km to 2.9 km from the EBDA Common outfall. Samples were collected 4 times each year, once

each season, for total coliform (488 samples), fecal coliform (348 samples), and enterococci (160 samples). These data show that the bacterial concentrations in the receiving water are in compliance with Basin Plan objectives and with USEPA criteria for enterococci. There was just 1, out of 348 fecal coliform samples, that shows a possible exceedance of the 90th percentile fecal coliform objective in the winter of 1998, which was an El Nino year. (Since that objective is based on at least 5 samples spaced over a 30-day period, we cannot say conclusively that there was actual exceedance or compliance with the objective.) The historical receiving water sampling results can be found in **Appendix F-4** of this Fact Sheet.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

a. As specified in section 122.44(d)(1)(i), permits are required to include WQBELs for pollutants (including toxicity) that are or may be discharged at levels that cause, have the reasonable potential to cause, or contribute to an in-stream excursion above any state water quality standard. WQBELs in this Order are revised and updated from the limitations in the previous permit, and their presence in this Order is based on an evaluation of the Discharger's data as described below under the Reasonable Potential Analysis. Under State Law (SIP) numeric WQBELs are required for all constituents that have a reasonable potential to cause or contribute to an excursion above any State water quality standard. Reasonable potential is determined and final WQBELs are developed using the methodology outlined in the SIP. If the Discharger demonstrates that the final limitations will be infeasible to meet and provides justification for a compliance schedule, then interim limitations are established, with a compliance schedule to achieve the final limits.

b. Maximum Daily Effluent Limitations (MDELs) are used in this permit to protect against acute water quality effects. It is impracticable to use weekly average limitations to guard against acute effects. Although weekly averages are effective for monitoring the performance of biological wastewater treatment plants, the MDELs are necessary for preventing fish kills or mortality to aquatic organisms, as further explained in subsections c through e, below.

c. NPDES regulations, the SIP, and USEPA's Technical Support Document (TSD) provide the basis to establish MDELs. NPDES regulations at 40 CFR §122.45(d) state:

"For continuous discharges all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall *unless impracticable* be stated as:

(1) Maximum daily and average monthly discharge limitations for all discharges other than publicly owned treatment works; and

(2) Average weekly and average monthly discharge limitations for POTWs." (Emphasis added.)

d. The amended SIP (p. 8, Section 1.4) requires that WQBELs be expressed as MDELs and average monthly effluent limitations (AMELs). For aquatic life-based calculations (only), the amended SIP indicates MDELs are to be used in place of average weekly limitations for POTWs.

e. The TSD (p. 96) states that a maximum daily limitation is appropriate for two reasons:

(1) The basis for the 7-day average for POTWs derives from the secondary treatment requirements. This basis is not related to the need for assuring achievement of water quality standards.

(2) The 7-day average, which could be comprised of up to seven or more daily samples, could average out peak toxic concentrations, and therefore the discharge's potential for causing acute toxic effects would be missed. A maximum daily limitation would be toxicologically protective of potential acute toxicity impacts.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

a. *Applicable Beneficial Uses.* Beneficial uses applicable to Lower San Francisco Bay are from the Basin Plan and are as follows:

Table F-7. Basin Plan Beneficial Uses of Lower San Francisco Bay

Discharge Point	Receiving Water Name	Beneficial Use(s)
001 (E-1)	Lower San Francisco Bay	Industrial Service Supply (IND) Navigation (NAV) Water Contact Recreation (REC1) Non-contact Water Recreation (REC2) Ocean Commercial and Sport Fishing (COMM) Wildlife Habitat (WILD) Preservation of Rare and Endangered Species (RARE) Fish Migration (MIGR) Shellfish Harvesting (SHELL), and Estuarine Habitat (EST)

b. The WQOs/WQC applicable to the receiving water of this discharge are from the Basin Plan, CTR, and NTR.

(1) The Basin Plan specifies numeric WQOs for 10 priority toxic pollutants, as well as narrative WQOs for toxicity and bioaccumulation in order to protect beneficial uses. The pollutants for which the Basin Plan specifies numeric objectives are

arsenic, cadmium, chromium (VI), copper in fresh water, and lead, mercury, nickel, silver, zinc, and total polynuclear aromatic hydrocarbons (PAHs) in salt water. The narrative toxicity objective states in part "[a]ll waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms." The bioaccumulation objective states in part "[c]ontrollable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life. Effects on aquatic organisms, wildlife, and human health will be considered." Effluent limitations and provisions contained in this Order are designed to implement these objectives, based on available information.

(2) The CTR specifies numeric aquatic life criteria for 23 priority toxic pollutants and numeric human health criteria for 57 priority toxic pollutants. These criteria apply to inland surface waters and enclosed bays and estuaries such as San Francisco Bay, except where the Basin Plan's Tables 3-3 and 3-4 specify numeric objectives for certain of these priority toxic pollutants. The Basin Plan's numeric objectives apply over the CTR (except in the South Bay south of the Dumbarton Bridge).

(3) The NTR established numeric aquatic life criteria for selenium, numeric aquatic life and human health criteria for cyanide, and numeric human health criteria for 34 toxic organic pollutants for waters of San Francisco Bay upstream to, and including, Suisun Bay and the Sacramento-San Joaquin Delta. This includes the receiving water for this Discharger.

c. Where RP exists, but numeric WQOs/WQC have not been established or updated in the Basin Plan, CTR, or NTR, 40 CFR §122.44(d) and Chapter 4 of the Basin Plan specify that WQBELs may be set based on USEPA criteria, supplemented where necessary by other relevant information, to attain and maintain narrative WQC to fully protect designated beneficial uses. This Fact Sheet discusses the specific bases and rationales for the effluent limitations, and is incorporated as part of the Order.

d. *Basin Plan Amendment.* On January 21, 2004, the Regional Water Board adopted Resolution No. R2-2004-0003 amending the Basin Plan to (1) update the dissolved WQOs for metals to be identical to the CTR WQC except for cadmium; (2) to change the Basin Plan definitions of marine, estuarine and freshwater to be consistent with the CTR definitions; (3) to update NPDES implementation provisions to be consistent with the SIP; (4) to remove settleable matter effluent limitations for POTWs, and other editorial changes. Subsequent to approval by the State Water Resources Control Board (State Water Board) and the Office of Administrative Law (OAL) (July 22, 2004, and October 4, 2004, respectively), USEPA approved the amendment on January 5, 2005.

e. *Basin Plan and CTR Receiving Water Salinity Policy.* The Basin Plan and CTR state that the salinity characteristics (i.e., freshwater versus saltwater) of the receiving water shall be considered in determining the applicable WQOs/WQC. Freshwater criteria shall apply to discharges to waters with salinities equal to or less than 1 ppt at least 95 percent of the time. Saltwater criteria shall apply to discharges to waters with salinities

equal to or greater than 10 ppt at least 95 percent of the time in a normal water year. For discharges to waters with salinities in between these two categories, or tidally influenced fresh waters that support estuarine beneficial uses, the criteria shall be the lower of the salt- or freshwater criteria (the freshwater criteria for some metals are calculated based on ambient hardness) for each substance.

Receiving Water Salinity. The receiving waters for the subject discharge are the waters of Lower San Francisco Bay. The Regional Monitoring Program (RMP) has collected receiving water salinity data at the Yerba Buena RMP station (BC10) from March 1993 through August 2003. There are a total of 44 salinity measurements available; all of which are above 10 ppt. As a result, the receiving water is classified as saltwater by both the Basin Plan and CTR definitions, and the effluent limitations specified in this Order are based on the saltwater WQOs and WQC of the Basin Plan, CTR, and NTR.

f. *Copper/Nickel/Zinc Translators.* The CTR and the Basin Plan establish aquatic life- and human health-based water quality criteria. The water quality criteria are typical values based on default site conditions and assumptions. However, site-specific conditions such as water temperature, pH, hardness, concentrations of metal binding sites, particulates, organic carbon, dissolved organic carbon, and concentrations of other chemicals can greatly impact the chemical toxicity. The purpose of a translator is to adjust these default assumptions for varying site-specific conditions to prevent exceedingly stringent or under protective water quality objectives.

The Basin Plan WQOs and CTR WQC for metals are expressed in the dissolved form of the metal (except for cadmium). The CTR conversion factors are used to convert the dissolved Basin Plan and CTR WQOs/WQC to total recoverable values. When site-specific translators are available, they will be use instead of CTR conversion factors.

The San Francisco Estuary Institute (SFEI), in collaboration with the Regional Water Board and the regulated discharger community collects water samples approximately three times per year at various monitoring stations throughout the San Francisco Bay region (the Regional Monitoring Program or RMP). SFEI has collected data for total and dissolved trace metals since 1993.

For the Regional Water Board's copper/nickel site-specific translator study (SSO study), ambient copper and nickel data were collected during four sampling events in 2000 – 2001 at thirteen stations. These data were used to augment all relevant RMP data for computing copper and nickel translators. The combined RMP and special study data were pooled into representative data sets to derive translators. The data were pooled using four categories including Central Bay, North Bay, All Data, and All Data but BD15 (mouth of Petaluma River). The recommended choices of translators appropriate to this Discharger (Central Bay regions) are shown in Table F-8.

Table F-8. Translators for Copper and Nickel for Deepwater Discharges North of Dumbarton Bridge (Central Bay Regions)

Bay Segment	Copper AMEL Translator	Copper MDEL Translator	Nickel AMEL Translator	Nickel MDEL Translator
Central Bay Regions 3&4	0.74	0.88	0.65	0.85

In addition, site-specific translators for zinc were calculated using the RMP data collected during 1993 through 2003 at the Alameda station (BB70), and two other Central Bay stations under the randomized sampling program, near the Discharger's outfall. The translators are calculated to be 0.30 for chronic WQC, and 0.46 for acute WQC.

The site-specific translators indicate that the USEPA default conversion factors are overly-protective of aquatic life. Application of these translators to water quality criteria will not eliminate reasonable potential.

4. Determining the Need for WQBELs

Title 40 CFR Part 122.44(d) (1) (i) requires permits to include WQBELs for all pollutants (non-priority or priority) "which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any narrative or numeric criteria within a State water quality standard" (have Reasonable Potential). Thus, assessing whether a pollutant has Reasonable Potential is the fundamental step in determining whether or not a WQBEL is required. For non-priority pollutants, Regional Water Board staff used available monitoring data, receiving water's designated uses, and/or previous permit pollutant limitations to determine Reasonable Potential as described in Sections 3.a. and 3.b. below. For priority pollutants, Regional Water Board staff used the methods prescribed in Section 1.3 of the SIP to determine if the discharge from Discharge Point 001 (E-1) demonstrates Reasonable Potential.

Reasonable Potential Analysis

Using the methods prescribed in Section 1.3 of the SIP, Regional Water Board staff analyzed the effluent data to determine if the discharge from 001 (M00-1) demonstrates Reasonable Potential. The Reasonable Potential Analysis (RPA) compares the effluent and receiving water data with numeric and narrative WQOs in the Basin Plan and numeric WQC from the USEPA, the NTR, and the CTR. The Basin Plan objectives and CTR criteria are shown in **Appendix F-2** of this Fact Sheet.

Reasonable Potential Methodology

Using the methods and procedures prescribed in Section 1.3 of the SIP, Regional Water Board staff analyzed the effluent and background data and the nature of facility operations to determine if the discharge has reasonable potential to cause or contribute to exceedances

of applicable SSOs or WQC. **Appendix F-2** of this Fact Sheet shows the stepwise process described in Section 1.3 of the SIP.

The RPA identifies the observed MEC in the effluent for each pollutant, based on effluent concentration data. There are three triggers in determining Reasonable Potential:

1) The first trigger (Trigger 1) is activated when the MEC is greater than or equal to the lowest applicable WQO/WQC, which has been adjusted for pH, hardness (for freshwater WQO/WQC only), and translator data, if appropriate. If the MEC is greater than or equal to the adjusted WQO/WQC, then that pollutant has reasonable potential and a WQBEL is required.

2) The second trigger (Trigger 2) is activated if the observed maximum ambient background concentration (B) is greater than the adjusted WQO/WQC (B>WQO/WQC), and the pollutant was detected in the effluent.

3) The third trigger (Trigger 3) is activated if a review of other information determines that a WQBEL is required even though both MEC and B are less than the WQO/WQC, or effluent and background data are unavailable or insufficient (e.g., all nondetects). A limitation is required only under certain circumstances to protect beneficial uses.

Effluent Data

The Regional Water Board's August 6, 2001 letter titled *Requirement for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy* (hereinafter referred to as the August 6, 2001 Letter) to all permittees, formally required the Discharger (pursuant to Section 13267 of the CWC) to initiate or continue to monitor for the priority pollutants using analytical methods that provide the best detection limits reasonably feasible. Regional Water Board staff analyzed this effluent data and the nature of Lower San Francisco Bay to determine if the discharge has Reasonable Potential. The RPA was based on the effluent monitoring data from January 2001 through December 2004 for metals, inorganic priority pollutants, and organic priority pollutants.

EBDA will receive reverse osmosis (RO) concentrated reject water from two groundwater demineralization plants, each with an average daily flow of 1.6 million gallons per day (MGD). The first plant is expected to be operational in 2008 and the second in 2012. Groundwater samples were collected at the Mocho and the Hopyard/Bernal well fields. In a memorandum entitled *GW Data for GW RO Plant Sites*, dated March 1, 2005 for the Zone 7 Water Agency, data for several trace metals and volatile and semi-volatile trace organics were compiled. RO concentrated reject water was estimated to be five times higher than the groundwater quality results. To estimate the effect of adding this concentrate reject water to the EBDA system, a mass balance was conducted to approximate the effluent concentration at the EBDA outfall according to the following equation:

$$C_{est} = \frac{Q_m \times (5 \times C_m) + Q_h \times (5 \times C_h) + Q_{EBDA} \times C_{EBDA}}{Q_m + Q_h + Q_{EBDA}}$$

Where:

C_{est} = estimated combined effluent constituent concentration at EBDA outfall;
C_m = groundwater concentration of constituent at the Mocho well field;
C_h = groundwater concentration of constituent at the Hopyard/Bernal well field;
C_{EBDA} = effluent concentration at EBDA outfall;
Q_m = concentrated reject water flow at the Mocho Demineralization Plant (1.6 MGD);
Q_h = concentrated reject water flow at the Hopyard/Bernal Demineralization Plant (1.6 MGD); and
Q_{EBDA} = effluent flow at the EBDA outfall.

Ambient Background Data

Ambient background values are used in the reasonable potential analysis (RPA) and in the calculation of effluent limitations. For the RPA, ambient background concentrations are the observed maximum detected water column concentrations. The SIP states that for calculating WQBELs, ambient background concentrations are either the observed maximum ambient water column concentrations or, for criteria/objectives intended to protect human health from carcinogenic effects, the arithmetic mean of observed ambient water concentrations. The RMP station at Yerba Buena Island, located in the Central Bay, has been sampled for most of the inorganic (CTR constituent numbers 1–15) and some of the organic (CTR constituent numbers 16–126) priority pollutants. Not all the constituents listed in the CTR were analyzed by the RMP during this time.

These data gaps are addressed by the Regional Water Board's August 6, 2001 Letter titled "Requirement for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy" (hereinafter referred to as the Board's August 6, 2001 Letter—available online; see Standard Language and Other References Available Online, below). The Board's August 6, 2001 Letter formally requires the Dischargers (pursuant to Section 13267 of the California Water Code) to conduct ambient background monitoring and effluent monitoring for those constituents not currently sampled by the RMP and to provide this technical information to the Board.

On May 15, 2003, a group of several San Francisco Bay Region Dischargers (known as the Bay Area Clean Water Agencies, or BACWA) submitted a collaborative receiving water study, entitled the *San Francisco Bay Ambient Water Monitoring Interim Report*. This study includes monitoring results from sampling events in 2002 and 2003 for the remaining priority pollutants not monitored by the RMP. The RPA was conducted and the WQBELs were calculated using RMP data from 1993 through 2003 for inorganics and organics at the Yerba Buena Island RMP station, and additional data from the BACWA *Ambient Water Monitoring: Final CTR Sampling Update Report* for the Yerba Buena Island RMP station. The Dischargers may utilize the receiving water study provided by BACWA to fulfill all requirements of the August 6, 2001 letter for receiving water monitoring in this Order.

RPA Determination

The *MECs*, WQOs/WQC, bases for the WQOs/WQC, background concentrations used, and Reasonable Potential conclusions from the RPA are listed in the following table for all constituents analyzed. Some of the constituents in the CTR were not determined because of the lack of an objective/criteria or effluent data. Based on the RPA methodology in the SIP, most constituents did not demonstrate Reasonable Potential. The RPA results are shown below and in **Appendix F-2** of this Fact Sheet. The pollutants that exhibit Reasonable Potential are copper, mercury, nickel, zinc, cyanide, and heptachlor.

Table F-9. Summary of RPA Results

CTR #	Priority Pollutants	MEC or Minimum DL [a][b] (µg/L)	Governing WQO/WQC (µg/L)	Maximum Background or Minimum DL [a][b] (µg/L)	RPA Results[c]
1	Antimony	4	4,300	**1.8**	No
2	Arsenic	**1.8**	36	**2.46**	No
3	Beryllium	**0.075**	No Criteria	**0.215**	Uo
4	Cadmium	**1.3**	9.4	**0.1268**	No
5a	Chromium (III)	**2.57**	No Criteria	Not Available	No
5b	Chromium (VI)	**2.57**	50	**4.4**	No
6	Copper	**18.4**	10.1	**2.549**	**Yes**
7	Lead	**6.2**	8.5	**0.804**	No
8	Mercury	**0.049**	0.025	**0.0086**	**Yes**
9	Nickel	**18.7**	13	**3.73**	**Yes**
10	Selenium	**1.84**	5	**0.39**	No
11	Silver	**1.4**	2.2	**0.0516**	No
12	Thallium	**0.31**	6.3	**0.21**	No
13	Zinc	**205**	196	**4.4**	**Yes**
14	Cyanide	**6.2**	1	0.4	**Yes**
15	Asbestos	Not available	No Criteria	Not Available	Uo
16	2,3,7,8-TCDD (Dioxin)	9.50×10^{-6}	1.4×10^{-8}		Cannot Determine
	Dioxin TEQ	0	1.4×10^{-8}	**7.10×10^{-8}**	No
17	Acrolein	5	780	0.5	No
18	Acrylonitrile	1	0.66	**0.03**	No
19	Benzene	0.05	71	0.05	No
20	Bromoform	0.1	360	0.5	No
21	Carbon Tetrachloride	0.14	4.4	**0.06**	No
22	Chlorobenzene	0.05	21,000	0.5	No
23	Chlorodibromomethane	**0.22**	34	0.05	No
24	Chloroethane	0.19	No Criteria	0.5	Uo
25	2-Chloroethylvinyl Ether	0.1	No Criteria	0.5	Uo
26	Chloroform	**2.6**	No Criteria	0.5	Uo
27	Dichlorobromomethane	**0.26**	46	0.05	No
28	1,1-Dichloroethane	0.07	No Criteria	0.05	Uo
29	1,2-Dichloroethane	0.06	99	**0.04**	No
30	1,1-Dichloroethylene	0.05	3.2	0.5	No
31	1,2-Dichloropropane	0.12	39	0.05	No

CTR #	Priority Pollutants	MEC or Minimum DL [a][b] (µg/L)	Governing WQO/WQC (µg/L)	Maximum Background or Minimum DL [a][b] (µg/L)	RPA Results[c]
32	1,3-Dichloropropylene	0.07	1,700	Not Available	No
33	Ethylbenzene	0.08	29,000	0.5	No
34	Methyl Bromide	0.21	4,000	0.5	No
35	Methyl Chloride	**0.63**	No Criteria	0.5	Uo
36	Methylene Chloride	**1.2**	1,600	**0.5**	No
37	1,1,2,2-Tetrachloroethane	0.11	11	0.05	No
38	Tetrachloroethylene	0.11	8.85	0.05	No
39	Toluene	**1.6**	200,000	0.3	No
40	1,2-Trans-Dichloroethylene	0.14	140,000	0.5	No
41	1,1,1-Trichloroethane	0.08	No Criteria	0.5	Uo
42	1,1,2-Trichloroethane	0.03	42	0.05	No
43	Trichloroethylene	**0.15**	81	0.5	No
44	Vinyl Chloride	0.07	525	0.5	No
45	2-Chlorophenol	0.19	400	1.2	No
46	2,4-Dichlorophenol	0.29	790	1.3	No
47	2,4-Dimethylphenol	0.19	2,300	1.3	No
48	2-Methyl-4,6-Dinitrophenol	0.95	765	1.2	No
49	2,4-Dinitrophenol	0.95	14,000	0.7	No
50	2-Nitrophenol	0.095	No Criteria	1.3	Uo
51	4-Nitrophenol	1.9	No Criteria	1.6	Uo
52	3-Methyl-4-Chlorophenol	0.19	No Criteria	1.1	Uo
53	Pentachlorophenol	1.9	7.9	1	No
54	Phenol	**0.48**	4,600,000	1.3	No
55	2,4,6-Trichlorophenol	**0.1**	6.5	1.3	No
56	Acenaphthene	0.046	2,700	**0.0015**	No
57	Acenaphthylene	0.062	No Criteria	**0.00053**	Uo
58	Anthracene	0.0034	110,000	**0.0005**	No
59	Benzidine	4.8	0.00054	0.0015	No
60	Benzo(a)Anthracene	**0.007**	0.049	**0.0053**	No
61	Benzo(a)Pyrene	0.0079	0.049	**0.00029**	No
62	Benzo(b)Fluoranthene	**0.008**	0.049	**0.0046**	No
63	Benzo(ghi)Perylene	**0.035**	No Criteria	**0.0027**	Uo
64	Benzo(k)Fluoranthene	0.041	0.049	**0.0015**	No
65	Bis(2-Chloroethoxy)Methane	0.095	No Criteria	0.3	Uo
66	Bis(2-Chloroethyl)Ether	0.19	1.4	0.3	No
67	Bis(2-Chloroisopropyl)Ether	0.095	170,000	Not Available	No
68	Bis(2-Ethylhexyl)Phthalate	**2.4**	5.9	0.5	No
69	4-Bromophenyl Phenyl Ether	0.095	No Criteria	0.23	Uo
70	Butylbenzyl Phthalate	**0.88**	5,200	0.52	No
71	2-Chloronaphthalene	0.19	4,300	0.3	No
72	4-Chlorophenyl Phenyl Ether	0.19	No Criteria	0.3	Uo
73	Chrysene	**0.034**	0.049	**0.0024**	No
74	Dibenzo(a,h)Anthracene	0.0054	0.049	**0.00064**	No

CTR #	Priority Pollutants	MEC or Minimum DL [a][b] (µg/L)	Governing WQO/WQC (µg/L)	Maximum Background or Minimum DL [a][b] (µg/L)	RPA Results[c]
75	1,2 Dichlorobenzene	0.05	17,000	0.8	No
76	1,3 Dichlorobenzene	0.05	2,600	0.8	No
77	1,4 Dichlorobenzene	**1.2**	2,600	0.8	No
78	3,3-Dichlorobenzidine	0.095	0.077	0.001	No
79	Diethyl Phthalate	**9.8**	120,000	0.24	No
80	Dimethyl Phthalate	0.095	2,900,000	0.24	No
81	Di-n-Butyl Phthalate	**1.3**	12,000	0.5	No
82	2,4-Dinitrotoluene	0.095	9.1	0.27	No
83	2,6-Dinitrotoluene	**0.92**	No Criteria	0.29	Uo
84	Di-n-Octyl Phthalate	0.095	No Criteria	0.38	Uo
85	1,2-Diphenylhydrazine	Not available	0.54	**0.0037**	Cannot Determine
86	Fluoranthene	**0.079**	370	**0.011**	No
87	Fluorene	0.0073	14,000	**0.00208**	No
88	Hexachlorobenzene	0.0015	0.00077	**0.0000202**	No
89	Hexachlorobutadiene	0.038	50	0.3	No
90	Hexachlorocyclopentadiene	0.95	17,000	0.31	No
91	Hexachloroethane	0.038	8.9	0.2	No
92	Indeno(1,2,3-cd) Pyrene	0.0045	0.049	**0.004**	No
93	Isophorone	0.095	600	0.3	No
94	Naphthalene	0.037	No Criteria	**0.0023**	Uo
95	Nitrobenzene	0.095	1,900	0.25	No
96	N-Nitrosodimethylamine	0.19	8.1	0.3	No
97	N-Nitrosodi-n-Propylamine	0.095	1.4	0.001	No
98	N-Nitrosodiphenylamine	0.095	16	0.001	No
99	Phenanthrene	**0.13**	No Criteria	**0.0061**	Uo
100	Pyrene	0.0027	11,000	**0.0051**	No
101	1,2,4-Trichlorobenzene	0.29	No Criteria	0.3	Uo
102	Aldrin	0.0018	0.00014	Not Available	No
103	alpha-BHC	0.00061	0.013	**0.000496**	No
104	beta-BHC	0.001	0.046	**0.000413**	No
105	gamma-BHC	**0.0083**	0.063	**0.0007034**	No
106	delta-BHC	0.00064	No Criteria	**0.000042**	Uo
107	Chlordane	0.014	0.00059	**0.00018**	No
108	4,4'-DDT	0.0013	0.00059	**0.000066**	No
109	4,4'-DDE	0.00097	0.00059	**0.000693**	No
110	4,4'-DDD	**0.0008**	0.00084	**0.000313**	No
111	Dieldrin	0.00077	0.00014	**0.000264**	No
112	alpha-Endosulfan	0.00067	0.0087	**0.000031**	No
113	beta-Endosulfan	**0.00060**	0.0087	**0.000069**	No
114	Endosulfan Sulfate	**0.0056**	240	**0.0000819**	No
115	Endrin	0.00063	0.0023	**0.000036**	No
116	Endrin Aldehyde	0.00042	0.81	Not Available	No
117	Heptachlor	**0.002**	0.00021	**0.000019**	**Yes**

CTR #	Priority Pollutants	MEC or Minimum DL [a][b] (µg/L)	Governing WQO/WQC (µg/L)	Maximum Background or Minimum DL [a][b] (µg/L)	RPA Results[c]
118	Heptachlor Epoxide	0.0012	0.00011	**0.000094**	No
119	PCB 1016	0.02	0.00017	Not Available	No
120	PCB 1221	0.14	0.00017	Not Available	No
121	PCB 1232	0.06	0.00017	Not Available	No
122	PCB 1242	0.02	0.00017	Not Available	No
123	PCB 1248	0.1	0.00017	Not Available	No
124	PCB 1254	0.08	0.00017	Not Available	No
125	PCB 1260	0.09	0.00017	Not Available	No
126	Toxaphene	0.072	0.0002	0.000050	No
	Total PAHs	Not Available	15	**0.052**	No
	Tributyltin	**0.0072**	0.011	Not Available	No

[a] Values for MEC or maximum background in **bold** are the actual detected concentrations, otherwise the values shown are the minimum detection levels. The MEC or maximum background concentration is "Not Available" when there are no monitoring data for the constituent.

[b] RPA Results = Yes, if MEC > WQO/WQC, or B > WQO/WQC and MEC is detected;
= No, if MEC and B are < WQO/WQC or if all effluent data are undetected below the lowest criterion or objective;
= Uo, cannot determine due to lack of criteria;
= Cannot Determine, if there are insufficient data, or if the effluent data are undetected at levels above the lowest criterion or objective.

1) **Constituents with limited data.** The Discharger has performed sampling and analysis for the constituents listed in the CTR. This data set was used to perform the RPA. In some cases, Reasonable Potential cannot be determined because effluent data are limited, or ambient background concentrations are not available. The Discharger will continue to monitor for these constituents in the effluent using analytical methods that provide the best feasible detection limits. When additional data become available, further RPA will be conducted to determine whether to add numeric effluent limitations to this Order or to continue monitoring.

2) **Pollutants with no Reasonable Potential.** WQBELs are not included in this Order for constituents that do not demonstrate Reasonable Potential; however, monitoring for those pollutants is still required. If concentrations of these constituents are found to have increased significantly, the Dischargers will be required to investigate the source(s) of the increase(s). Remedial measures are required if the increases pose a threat to water quality in the receiving water.

5. WQBEL Calculations

a. WQBELs were developed for the toxic and priority pollutants that were determined to have reasonable potential to cause or contribute to exceedances of the WQOs or WQC. The WQBELs were calculated based on appropriate WQOs/WQC and the appropriate procedures specified in Section 1.4 of the SIP. The WQOs or WQC used for each pollutant with Reasonable Potential is discussed below. The WQBELs calculation is

attached as **Appendix F-3** of this Fact Sheet. Dilution credits and interim limits are granted for select pollutants as described in subsections b. and c., and a summary of the results are presented in subsection d., below.

b. Dilution Credit

The SIP provides the basis for the dilution credit granted. The EBDA Common Outfall is designed to achieve a minimum of 10:1 dilution. Based on two-dimensional modeling in the Antidegradation report, the discharge generally achieves much greater than 10:1. However, review of RMP data (local and Central Bay stations), there is variability in the receiving water, and the hydrology of the receiving water is very complex. Therefore, there is uncertainty associated with the representative nature of the appropriate ambient background data for effluent limit calculations. Pursuant to Section 1.4.2.1 of the SIP, "dilution credit may be limited or denied on a pollutant-by-pollutant basis...." The Regional Water Board finds that a conservative 10:1 dilution credit for non-bioaccumulative priority pollutants, and a zero dilution credit for bioaccumulative priority pollutants are necessary for protection of beneficial uses. The detailed basis for each are explained below.

1) For certain bioaccumulative pollutants, based on BPJ, dilution credit is not included in calculating the final WQBELs. This determination is based on available data on concentrations of these pollutants in aquatic organisms, sediment, and the water column. The Regional Water Board placed selenium, mercury, and polychlorinated biphenyls (PCBs) on the CWA Section 303(d) list. U.S. EPA added dioxin and furan compounds, chlordane, dieldrin, and 4,4'-DDT to the CWA Section 303(d) list. Dilution credit is not included for mercury. The following factors suggest that there is no more assimilative capacity in the Bay for these pollutants.

   San Francisco Bay fish tissue data show that these pollutants exceed screening levels. The fish tissue data are contained in *Contaminant Concentrations in Fish from San Francisco Bay 1997* (May 1997). Denial of dilution credits for these pollutants is further justified by fish advisories for San Francisco Bay. The Office of Environmental Health and Hazard Assessment (OEHHA) performed a preliminary review of the data from the 1994 San Francisco Bay pilot study, *Contaminated Levels in Fish Tissue from San Francisco Bay*. The results of the study showed elevated levels of chemical contaminants in the fish tissues. Based on these results, OEHHA issued an interim consumption advisory covering certain fish species from the Bay in December 1994. This interim consumption advice was issued and is still in effect owing to health concerns based on exposure to sport fish from the Bay contaminated with mercury, dioxins, and pesticides (e.g., DDT).

2) Furthermore, Section 2.1.1 of the SIP states that for bioaccumulative compounds on the 303(d) list, the Regional Water Board should consider whether mass-loading limits should be limited to current levels. The Regional Water Board finds that mass-loading limits are warranted for mercury for the receiving waters of this

Discharger. This is to ensure that this Discharger does not contribute further to impairment of the narrative objective for bioaccumulation.

3). For non-bioaccumulative constituents, a conservative allowance of 10:1 dilution for discharges to the Bay has been assigned for protection of beneficial uses. The basis for using 10:1 is that it was granted in the previous permit. This 10:1 is also based on the Basin Plan's prohibition number 1, which prohibits discharges like those from 001 with less than 10:1 dilution. Limiting the dilution credit is based on SIP provisions in Section 1.4.2. The following outlines the basis for derivation of the dilution credit.

i. A far-field background station is appropriate because the receiving water body (the Bay) is a very complex estuarine system with highly variable and seasonal upstream freshwater inflows and diurnal tidal saltwater inputs. The SIP allows background to be determined on a discharge-by-discharge or water body-by-water body basis (SIP 1.4.3). Consistent with the SIP, Regional Water Board staff has chosen to use a water body-by-water body basis because of the uncertainties inherent in accurately characterizing ambient background in a complex estuarine system on a discharge-by-discharge basis.
The Yerba Buena Island Station fits the guidance for ambient background in the SIP compared to other stations in the RMP. The SIP states that background data are applicable if they are "representative of the ambient receiving water column that will mix with the discharge." Regional Water Board staff believes that data from this station are representative of water that will mix with the discharge from 001. Although this station is located near the Golden Gate, it would represent the typical water flushing in and out of the Bay each tidal cycle. For most of the Bay, the waters represented by this station make up a large part of the receiving water the will mix with the discharge.

ii. Because of the complex hydrology of the San Francisco Bay, a mixing zone has not been established. There are uncertainties in accurately determining the mixing zones for each discharge. The models that have been used to predict dilution have not considered the three-dimensional nature of the currents in the estuary resulting from teh interaction of tidal flushes and seasonal fresh water outflows. Salt water is heavier than fresh water, colder saltwater from the ocean flushes in twice a day generally under the warmer fresh river waters that flow out annually. When these waters mix and interact, complex circulation patterns occur due to the different densities of these waters. These complex patterns occur throughout the estuary but are most prevalent in the San Pablo, Carquinez Strait, and Suisun Bay areas. The locations change depending on the strength of each tide and the variable rate of delta outflow. Additionally, sediment loads to the bay from the Central Valley also change on a longer-term basis. These changes can result in changes to the depths of different parts of the Bay making some areas more shallow and/or other areas more deep. These changes affect flow patterns that in turn can affect the initial dilution achieved by a diffuser.

iii. The SIP allows limiting a mixing zone and dilution credit for persistent pollutants (e.g., copper, silver, nickel, and lead). Discharges to the bay are defined in the SIP as incompletely mixed discharges. Thus, dilution credit should be determined using site-specific information. The SIP 1.4.2.2 specifies that the Regional Water Board "significantly limit a mixing zone and dilution credit as necessary... For example, in determining the extent of a mixing zone or dilution credit, the RWQCB shall consider the presence os pollutants in the discharge that are ...persistent." The SIP defines persistent pollutants to be "substances for which degradation or decomposition in the environment is nonexistent or very slow." The pollutants at issue here are persistent pollutants (e.g. copper). The dilution studies that estimate actual dilution do not address the effects of these persistent pollutants in the Bay environment, such as their long-term effects on sediment concentrations.

c. Interim Limitations and Compliance Schedules

i. Pursuant to Section 2.1.1 of the SIP, "the compliance schedule provisions for the development and adoption of a TMDL only apply when: (a) the Discharger requests and demonstrates that it is infeasible for the Discharger to achieve immediate compliance with a CTR criterion; and (b) the Discharger has made appropriate commitments to support and expedite the development of the TMDL. In determining appropriate commitments, the Regional Water Board should consider the Discharger's contribution to current loadings and the Discharger's ability to participate in TMDL development." As further described in a finding below, the Discharger has requested and demonstrated that it is infeasible to achieve immediate compliance for mercury. Also, the Discharger has agreed to assist the Regional Water Board in TMDL development through its affiliation with BACWA. The Regional Water Board adopted Resolution No. 01-103, on September 19, 2001, with BACWA, and other parties to accelerate the development of Water Quality Attainment Strategies including the TMDLs for the San Francisco Bay-Delta and its tributaries.

ii. The SIP and the Basin Plan authorize compliance schedules in a permit if an existing discharger cannot immediately comply with a new and more stringent effluent limitation. Compliance schedules for limitations derived from CTR or the NTR WQC are based on Section 2.2 of the SIP, and compliance schedules for limitations derived from Basin Plan WQOs are based on the Basin Plan. Both the SIP and the Basin Plan require the discharger to demonstrate the infeasibility of achieving immediate compliance with the new limitation to qualify for a compliance schedule. The SIP and Basin Plan require the following documentation to be submitted to the Regional Water Board to support a finding of infeasibility:

- Descriptions of diligent efforts the Discharger has made to quantify pollutant levels in the discharge, sources of the pollutant in the waste stream, and the results of those efforts.

- Descriptions of source control and/or pollutant minimization efforts currently under way or completed.
- A proposed schedule for additional or future source control measures, pollutant minimization, or waste treatment.
- A demonstration that the proposed schedule is as short as practicable.

The Basin Plan provides for a 10-year compliance schedule to implement measures to comply with new standards as of the effective date of those standards. This provision applies to the objectives adopted in the 2004 Basin Plan Amendment. Additionally, the provision authorizes compliance schedules for new interpretations of other existing standards if the new interpretation results in more stringent limitations. The basis for compliance schedules is given in **Appendix F-5** of this Fact Sheet.

iii. On April 1, 2006 and May 19, 2006, the Discharger submitted an infeasibility analysis (the 2006 Infeasibility Analysis) and a revision, respectively, asserting it is infeasible to immediately comply with the WQBELs, calculated according to SIP Section 1.4, for mercury, cyanide, and heptachlor. Regional Water Board independently analyzed the effluent data and considered the Discharger's past efforts and concurred that it is infeasible to achieve immediate compliance for these pollutants.

iv. The interim limitations for mercury, cyanide, and heptachlor will remain in effect until April 27, 2010, or until the Regional Water Board adopts a TMDL-based effluent limitation for mercury, SSO for cyanide, or additional information for heptachlor.

v. This Order establishes a compliance schedule that extends beyond one year for mercury, cyanide, and heptachlor. Pursuant to the SIP and 40 CFR 122.47, the Regional Water Board shall establish interim numeric limitations and interim requirements to control these pollutants. This Order establishes interim limitations for mercury based on the previous permit limitation and existing performance. This Order also establishes interim requirements in a provision for development and/or improvement of a Pollution Prevention and Minimization Program to reduce pollutant loadings to the plant, and for submittal of annual reports on this Program.

vi. In addition to an interim mercury concentration limitation, this Order establishes an interim performance-based mass limitation to maintain the Discharger's current mass loadings of mercury into Lower San Francisco Bay. Mercury is a 303(d)-listed bioaccumulative pollutant. The interim performance-based mass limitation has been recalculated using recent performance data.

d. Summary of Effluent Limitations for Discharge Point 001

Table F-10. Summary of Effluent Limitations for Discharge Point 001

Parameter	Units	Water Quality-Based Effluent Limits		Interim Limits	
		Daily Maximum (MDEL)	Monthly Average (AMEL)	Daily Maximum	Monthly Average
Copper	µg/L	100 (78)	71 (53)	---	---
Mercury	µg/L	0.037	0.022	---	0.087
Nickel	µg/L	160	79	---	---
Zinc	µg/L	580	---	---	---
Cyanide	µg/L	6.4 (42)	3.1 (21)	21	---
Heptachlor	µg/L	0.00042	0.00021	---	0.01

e. Calculation of Pollutant Specific WQBELs

1) Copper

i. *Copper WQO.* The marine chronic and acute criteria for dissolved copper adopted in the CTR and Basin Plan are defined as 3.1 and 4.8 ug/L multiplied by a Water Effects Ratio or WER (40 CFR 131.38 (b) and (c)(4)(i) and (iii)). The default value for the WER is 1.0 unless a WER has been developed as set forth in USEPA's WER guidance (Interim Guidance on Determination and Use of Water Effect Ratios, USEPA Office of Water, EPA-823-B-94-001, February 1994). WERs have been developed for San Francisco Bay in accordance with this USEPA guidance as documented in *North of Dumbarton Bridge Copper and Nickel Site-Specific Objective (SSO) Derivation (Clean Estuary Partnership December 2004)*. Based on the data in this report, a WER of 2.4 is appropriate for this discharge. In addition, Regional Water Board developed copper site-specific translators along with the study using RMP data for the Central Bay. The translators are 0.74 and 0.88 for converting chronic and acute dissolved WQOs into total WQOs, respectively. The resulting adjusted WQC for this discharge are 10.1 ug/L for chronic protection and 13.1 ug/L for acute protection.

ii. *RPA Results.* This Order establishes effluent limitations for copper because the 18.4 µg/L MEC exceeds the governing WQO of 10.1 µg/L, demonstrating reasonable potential by Trigger 1, as defined in Section IV.C.10.b. of this fact sheet. Inclusion of the RO reject water to the effluent also results in a copper MEC of 18.4 µg/L, which still exceeds the governing WQC.

iii. *WQBELs.* The copper WQBELs calculated according to SIP procedures are 100 µg/L as the maximum daily effluent limit (MDEL) and 71 µg/L as the average

monthly effluent limit (AMEL). A dilution credit of 10:1 was incorporated into the calculation of WQBELs.

iv. *Plant Performance and Attainability.* During the period January 2001 through December 2004, the Discharger's effluent concentrations were in the range of 3.8 µg/L to 18.4 µg/L (48 samples). There is no exceedance of the MDEL. Therefore, it is expected that the Discharger can comply with the AMEL.

v. *Copper SSO and Alternate WQBELs.* During the permit term, the Regional Water Board may amend the copper WQBELs based on the SSO being developed for the San Francisco Bay as depicted in the documents cited in subsection i. above. The site specific objectives proposed are 6.0 µg/l as a four-day average and 9.4 µg/L as a one-hour average. Based on the Discharger's current copper data (coefficient of variation of 0.28), the alternate WQBELs for copper will be 78 µg/L as an MDEL, and 53 µg/L as an AMEL. These alternative limits will become effective only if the site-specific objective adopted contains the same assumptions in the report cited in subsection i. above.

vi. *Antibacksliding/Antidegradation.* The previous permit does not specify final WQBELs for copper, and only contains an interim performance-based effluent limitation of 23 µg/L. Antibacksliding does not apply to interim limits and since there were no final WQBELs in the previous permit to which to compare the new final WQBELs, there is no backsliding. With regard to antidegradation, the revised permit is consistent with antidegradation through enhanced pretreatment and pollutant minimization requirements that will hold the Discharger to current performance. Any possible change in copper discharges would be relatively small and have no discernable effect on the receiving water.

2) Mercury

i. *Mercury WQOs/WQC.* Both the Basin Plan and the CTR include objectives and criteria that govern mercury in the receiving water. The Basin Plan specifies objectives for the protection of saltwater aquatic life of 0.025 µg/L as a 4-day average and 2.1 µg/L as a 1-hour average. The CTR specifies a long-term average criterion for protection of human health of 0.051 µg/L.

ii. *Mercury RPA Results.* This Order establishes effluent limitations for mercury because the MEC for the Discharger's effluent was 0.049 µg/L, which triggers reasonable potential by Trigger 1. Inclusion of the RO reject water to the effluent results in a mercury MEC of 0.049 µg/L also, which still exceeds the governing WQC.

iii. *Mercury WQBELs.* The mercury WQBELs calculated according to SIP procedures are 0.037 µg/L for the MDEL and 0.022 µg/L for the AMEL. No dilution credit is allowed in calculating WQBELs for mercury.

iv. *Immediate Compliance Infeasible.* The Discharger's Infeasibility Analysis asserts the Discharger cannot immediately comply with these WQBELs for mercury. A statistical analysis was conducted on the Discharger's effluent data from January 2001 through December 2004. Based on the analysis, the Regional Water Board concurs with the Discharger's assertion of infeasibility to comply with final mercury WQBELs.

v. *Mercury Control Strategy.* The Regional Water Board is developing a TMDL to control mercury levels in San Francisco Bay. The Regional Water Board, together with other stakeholders, will cooperatively develop source control strategies as part of the TMDL development. Municipal discharge point sources do not represent a significant mercury loading to San Francisco Bay. Therefore, the currently preferred strategy is to apply interim mass loading limits to point source discharges while focusing mass reduction efforts on other more significant and controllable sources. While the TMDL is being developed, the Discharger will cooperate in maintaining ambient receiving water conditions by complying with performance-based mercury mass emission limits. Therefore, this Order includes interim mass loading effluent limitations for mercury, as described in the fact sheet below. The Discharger is required to implement source control measures and cooperatively participate in special studies as described below.

vi. *Mercury TMDL.* The current 303(d) list includes the San Francisco Bay as impaired by mercury, due to high mercury concentrations in the tissues of fish from the Bay. Methylmercury, a highly toxic form of mercury, is a persistent bioaccumulative pollutant. There is no evidence to show that mercury discharged by the Discharger is taken out of the hydrologic system, by processes such as evaporation before reaching San Francisco Bay. The Regional Water Board intends to establish a TMDL that will lead towards overall reduction of mercury mass loadings into San Francisco Bay. The final mercury effluent limitations will be based on the Discharger's WLA in the TMDL. While the TMDL is being developed, the Discharger will comply with performance-based mercury concentration and mass-based limitations to cooperate with maintaining current ambient receiving water conditions.

vii. *Interim Performance-based Effluent Limitation (IPBL).* Because it is infeasible for the Discharger to immediately comply with the mercury WQBELs, an interim limitation is required. An interim effluent limitation of 0.087 µg/L as an average monthly was determined from pooled ultra-clean mercury data for POTWs throughout the Region using secondary treatment (*Staff Report: Statistical Analysis of Pooled Data from Region-wide Ultra-clean Sampling, 2000*). The previous Order contained an interim effluent limitation of 0.21 µg/L as an average monthly, which is less stringent. Therefore, the interim effluent limitation of 0.087 µg/L as an average monthly is set as the interim limitation for this Order.

viii *Discharger's Performance and Attainability.* During the period of January 2001 through December 2004, the Discharger's effluent concentrations ranged from 0.009 µg/L to 0.049 µg/L (48 samples). All concentrations are below the IPBL, therefore, it is expected that the Discharger can comply with the IPBL for mercury.

ix. *Term of Interim Effluent Limitation.* The mercury interim concentration limitation shall remain in effect until April 27, 2010, or until the Regional Water Board amends the limitations based on additional data, information, or until the Regional Water Board adopts a TMDL-based effluent limitation for mercury.

x. *Antibacksliding/Antidegradation.* The previous permit does not specify final WQBELs for mercury, and only contains an interim performance-based effluent limitation of 0.21 µg/L. Antibacksliding does not apply to interim limits and since there were no final WQBELs in the previous permit to which to compare the new WQBELs, there is no backsliding.

3) Nickel

i. *Nickel WQO.* The saltwater objective for nickel in the Basin Plan is 8.2 µg/L for chronic protection and 74 µg/L for acute protection, expressed as dissolved metal. Regional Water Board developed nickel site-specific translators using RMP data for the Central Bay. The translators are 0.65 and 0.85 for converting chronic and acute dissolved WQOs into total WQOs, respectively. Using these translators, the translated criteria of 13 µg/L for chronic protection and 87 µg/L for acute protection were used to perform the RPA and to calculate effluent limitations.

ii. *RPA Results.* This Order establishes effluent limitations for nickel because the 19 µg/L MEC exceeds the governing WQO of 13 µg/L, demonstrating reasonable potential by Trigger 1, as defined in a previous finding. Inclusion of the RO reject water to the effluent results in a nickel MEC of 18.7 µg/L, which still exceeds the governing WQO.

iii. *WQBELs.* The nickel WQBELs calculated according to SIP procedures are 160 µg/L as the MDEL and 79 µg/L as the AMEL. A dilution credit of 10:1 was incorporated in the calculation of WQBELs.

iv. *Plant Performance and Attainability.* During the period January 2001 through December 2004, the Discharger's effluent concentrations were in the range of 2.9 µg/L to 19 µg/L (48 samples), all are below the AMEL of 81 µg/L. Therefore, it is expected that the Discharger can comply with the WQBELs.

v. *Nickel SSO.* During the permit term, the Regional Water Board may amend the nickel WQBELs based on the SSO being developed for the San Francisco Bay.

vi. *Antibacksliding/Antidegradation.* The previous permit does not specify final WQBELs for nickel, and only contains an interim performance-based effluent

limitation of 21 µg/L. Antibacksliding does not apply to interim limits and since there were no final WQBELs in the previous permit to which to compare the new WQBELs, there is no backsliding.

4) Zinc

i. *Zinc WQC.* The saltwater objective for zinc in the Basin Plan is 81 µg/L for chronic protection and 91 µg/L for acute protection, expressed as dissolved metal. The Discharger developed site-specific translators for zinc based on RMP data at the Alameda RMP station (BB70) and two other stations near the discharge (CB004W and CB006W). The translators are 0.30 and 0.46 for converting chronic and acute dissolved WQOs into total WQOs, respectively. Using these translators, the translated criteria of 270 µg/L for chronic protection and 196 µg/L for acute protection were used to perform the RPA and to calculate effluent limitations.

ii. *RPA Results.* This Order establishes effluent limitations for zinc because the 205 µg/L MEC exceeds the governing WQC of 196 µg/L, demonstrating reasonable potential by Trigger 1, as defined in Section IV.C.10.b. above.

iii. *WQBELs.* The zinc WQBELs calculated according to SIP procedures are 1900 µg/L as the MDEL and 990 µg/L as the AMEL. A dilution credit of 10:1 was incorporated in the calculation of WQBELs. The previous permit contains a WQBEL of 580 µg/L, which is based on the old Basin Plan WQO, and is more stringent.

iv. *Plant Performance and Attainability.* During the period January 2001 through December 2004, the Discharger's effluent concentrations were in the range of 30.2 µg/L to 205 µg/L (48 samples). Therefore, it is expected that the Discharger can comply with the previous permit limit, and as a result, the previous permit effluent limit of 580 µg/L is retained as the zinc effluent limit, expressed as a daily maximum effluent limit.

v. *Antibacksliding/Antidegradation.* The Antibacksliding/Antidegradation requirements are satisfied as the limit is unchanged from the previous permit.

5) Cyanide

i. *Cyanide WQOs.* The NTR includes WQC that govern cyanide for the protection of aquatic life in salt surface waters. The NTR specifies the saltwater Criterion Maximum Concentration (CMC) and Criterion Chronic Concentration (CCC) of 1 µg/L.

ii. *RPA Results.* This Order establishes effluent limitations for cyanide because the 6.2 µg/L MEC exceeds the governing WQC of 1 µg/L, demonstrating reasonable potential by Trigger 1, as defined in a previous finding.

iii. *WQBELs*. The cyanide WQBELs calculated according to SIP procedures are 6.4 µg/L as the MDEL and 3.1 µg/L as the AMEL. A dilution credit of 10:1 was incorporated in the calculation of WQBELs.

iv. *Immediate Compliance Infeasible*. The Discharger's Infeasibility Study asserts the Discharger cannot immediately comply with these WQBELs for cyanide. Due to high censoring of the effluent data, it is not possible to perform a meaningful statistical analysis. Since the MEC is greater than the AMEL, Regional Water Board concurs with the Discharger's assertion of infeasibility to comply with final cyanide WQBELs.

v. *Interim Effluent Limitation*. Because it is infeasible for the Discharger to immediately comply with the cyanide WQBELs, an interim effluent limitation is required. Regional Water Board staff considered the Discharger's effluent monitoring data from January 2001 through December 2004 to develop an interim limitation. Historically, interim performance-based effluent limits have been referenced to the 99.87th percentile value of recent performance data. However, due to the high number of censored values, a statistical analysis of the cyanide effluent data is not possible and therefore the previous interim effluent limit of 21 µg/L, expressed as a daily maximum, was used.

vi. *Plant Performance and Attainability*. During the period January 2001 through December 2004, the Discharger's effluent concentrations ranged from <3 µg/L to 6.2 µg/L (48 samples). Therefore, it is expected that the Discharger can comply with the cyanide interim effluent limitation.

vii. *Alternate Effluent Limits for Cyanide*. As described in *Draft Staff Report on Proposed Site-Specific Water Quality Objectives and Effluent Limit Policy for Cyanide for San Francisco Bay*, dated November 10, 2005, the Regional Water Board is proposing to develop site-specific criteria for cyanide. In this report, the proposed site-specific criteria for marine waters are 2.9 µg/L as a four-day average, and 9.4 µg/L as a one-hour average. Based on the Dischargers current cyanide data (coefficient of variation of 0.61), final water quality based effluent limits for cyanide will be 42 µg/L as an MDEL, and 21 µg/L as an AMEL. These alternative limits will become effective only if the site-specific objective adopted for cyanide contains the same assumptions in the staff report, dated November 10, 2005.

viii. *Antibacksliding/Antidegradation*. The previous permit does not specify final WQBELs for cyanide, and only contains an interim performance-based effluent limitation of 21 µg/L. Antibacksliding does not apply to interim limits and since there were no final WQBELs in the previous permit to which to compare the new WQBELs, there is no backsliding.

6) Heptachlor

i. *Heptachlor WQC.* In CTR, the lowest applicable criterion for heptachlor is the human health value of 0.00021 µg/L. This WQC is well below the ML of 0.01 µg/L, identified in Appendix 4 of the SIP.

ii. *RPA Results.* This Order establishes effluent limitations for heptachlor because the 0.002 µg/L MEC exceeds the governing WQC of 0.00021 µg/L, demonstrating reasonable potential by Trigger 1, as defined in a previous finding.

iii. *WQBELs.* The heptachlor WQBELs calculated according to SIP procedures are 0.00042 µg/L as the MDEL and 0.00021 µg/L as the AMEL. No dilution credit was incorporated in the calculation of WQBELs.

iv. *Immediate Compliance Infeasible.* The Discharger's Infeasibility Study asserts the Discharger cannot immediately comply with these WQBELs for heptachlor. Except for the MEC value listed in ii, above, the Discharger's monitoring data contain all non-detected values at an MDL of 0.00084 µg/L. The MDL and the SIP ML are both higher than the WQBELs. The only detected but not quantified value is above the AMEL, therefore, the Regional Water Board concurs with the infeasibility claim.

v. *Interim Effluent Limitation.* Because it is infeasible for the Discharger to immediately comply with the heptachlor WQBELs, the ML of 0.01 µg/L is established as an interim effluent limitation, expressed as a monthly average. A monthly average is used since the WQC is based on human health, which is based on long term exposure.

vi. *Plant Performance and Attainability.* During the period January 2001 through December 2004, the Discharger's effluent concentrations ranged from <0.00084 µg/L to 0.002 µg/L (23 samples). Therefore, it is expected that the Discharger can comply with the interim effluent limitation.

vii. *Antibacksliding/Antidegradation.* There is no effluent limitation for heptachlor in the previous Order. Therefore, there is no antibacksliding/anitidegradation.

6. Whole Effluent Acute Toxicity

a. *Permit Requirements.* This Order includes effluent limits for whole-effluent acute toxicity that are unchanged from the previous Order. All bioassays shall be performed according to the U.S. EPA approved method in 40 CFR 136, currently "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, 5th Edition." The Discharger is required to use the 5th Edition method for compliance determination upon the effective date of this Order

b. *Compliance History.* The Discharger's acute toxicity monitoring data show that there were no exceedances of the effluent limitations during 2001-2004, with fish survival rates ranging between 75-100% for three-spined stickleback.

c. *Ammonia Toxicity.* If acute toxicity is observed in the future and the Discharger believes that it is due to ammonia toxicity, this has to be shown through a Toxicity Identification Evaluation (TIE) acceptable to the Executive Officer. If the Discharger demonstrates to the satisfaction of the Executive Officer that exceedance of the acute toxicity limits is caused by ammonia and that the ammonia in the discharge is not adversely impacting receiving water quality or beneficial uses, then such toxicity does not constitute a violation of this effluent limit. If ammonia toxicity is verified in the TIE, the Discharger may utilize a pH adjustment protocol approved by the Executive Officer for the routine bioassay testing.

7. Whole Effluent Chronic Toxicity

a. *Permit Requirements.* This permit includes requirements for chronic toxicity monitoring based on the Basin Plan narrative toxicity objective, and in accordance with U.S. EPA and State Water Board Task Force guidance, and BPJ. This permit includes the Basin Plan narrative toxicity objective as the applicable effluent limit, implemented via monitoring with numeric values as "triggers" to initiate accelerated monitoring and to initiate a chronic toxicity reduction evaluation (TRE) as necessary. The permit requirements for chronic toxicity are also consistent with the CTR and SIP requirements.

b. *Chronic Toxicity Triggers.* This Order includes chronic toxicity triggers, which are three sample median of 10 chronic toxicity units (TUc) and a single sample maximum of 20 TUc.

c. *Monitoring History.* The Discharger's chronic toxicity monitoring data show that there were no exceedances of the triggers during 2001-2004 with TUc values ranging from 2.0 to 20, with an average of 2.6 using *Ceriodaphnia dubia*.

d. *Screening Phase Study.* The Discharger has conducted a chronic toxicity screening phase study and the results of this study have been incorporated herein.

e. *Permit Reopener.* The Regional Water Board will consider amending this permit to include numeric toxicity limits if the Discharger fails to aggressively implement all reasonable control measures included in its approved TRE workplan, following detection of consistent significant non-artifactual toxicity.

8. Mercury Interim Mass Emission Limitation

This Order includes an interim performance-based mercury mass effluent limitation of 0.384 kg/month. This performance-based mass effluent limitation is intended to maintain the discharge at current loadings. The mass limitation is recalculated using the ultra-clean data collected from January 2001 through December 2004 as it better reflects the Discharger's performance. The recalculated mass limit is a reflection of better mercury

effluent data (sampling and analytical techniques have improved), (see **Appendix F-6** for the mercury mass limitation calculation.) The mass limit will maintain current loadings until a TMDL is established for San Francisco Bay. The final mercury effluent limitations will be based on the Discharger's WLA in the TMDL.

The inclusion of interim performance-based mass limits for bioaccumulative pollutants is consistent with the guidance described in section 2.1.1 of the SIP. Because of their bioaccumulative nature, an uncontrolled increase in the total mass load of these pollutants in the receiving water will have significant adverse impacts on the aquatic ecosystem.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Receiving Water Limitations V.A1. (conditions to be avoided): These limitations are in the existing permit, edited to more closely reflect the Basin Plan, and are based on water quality objectives for physical, chemical, and biological characteristics from Chapter III of the Basin Plan.

B. Receiving Water Limitation V.A.2. (special limitations): This limitation is in the existing permit, requires compliance with Federal and State law, and is self-explanatory.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

The principal purposes of a monitoring program by a discharger are to:

- Document compliance with waste discharge requirements and prohibitions established by the Regional Water Board,
- Facilitate self-policing by the discharger in the prevention and abatement of pollution arising from waste discharge,
- Develop or assist in the development of limitations, discharge prohibitions, national standards of performance, pretreatment and toxicity standards, and other standards, and to
- Prepare water and wastewater quality inventories.

Section 122.48 of 40 CFR requires all NPDES permits to specify recording and reporting of monitoring results. Sections 13267 and 13383 of the California Water Code authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program, **Attachment E** of this Order, establishes monitoring and reporting requirements to implement Federal and State requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP.

The MRP is a standard requirement in almost all NPDES permits issued by the Regional Water Board, including this Order. It contains definitions of terms, specifies general sampling and analytical protocols, and sets out requirements for reporting of spills, violations, and routine monitoring data in accordance with NPDES regulations, the California Water Code, and Regional

Water Board policies. The MRP also contains a sampling program specific for EBDA and LAVWMA and their member agencies. It defines the sampling stations and frequency, the pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all parameters for which effluent limitations are specified. Monitoring for additional constituents, for which no effluent limitations are established, is also required to provide data for future completion of RPAs for them.

A. Influent Monitoring

The MRP includes monitoring for conventional and priority pollutants. This Order requires daily flow monitoring and twice per week monitoring for carbonaceous biochemical oxygen demand (CBOD) and four times per week for total suspended solids (TSS) to facilitate self-policing for the prevention and abatement of potential pollution arising in the treatment plant influent. Monitoring for CBOD has increased from weekly to twice per week, and for TSS from weekly to four times per week, to be consistent with Regional Water Board's requirements for other similar large secondary level POTWs. This Order also requires quarterly influent monitoring of copper, mercury, nickel, zinc, cyanide, and other priority pollutants, consistent with the pretreatment requirements.

B. Effluent Monitoring

The MRP includes monitoring at M-001 and M-002 for conventional and priority pollutants. This Order requires twice per week monitoring of pH, temperature, dissolved oxygen, CBOD, and fecal coliform, and four times per week for TSS. Monitoring for the above pollutants has increased from weekly to be consistent with Regional Water Board requirements for other similar large secondary level POTWs. Semi-monthly monitoring of ammonia nitrogen at M-001 is required. Acute toxicity testing is required monthly at M-001, and chronic toxicity testing is required quarterly at M-001, which is unchanged from the previous permit. Chlorine residual monitoring is required continuously. These are unchanged from the previous permit. Copper, mercury, nickel, zinc, and cyanide are required to by tested monthly, heptachlor at twice per year, and other priority pollutants are required to be tested as indicated as part of the pretreatment requirements. These monitoring requirements are unchanged from the previous permit (except for chronic toxicity, see below). In addition, the Discharger shall continue its effluent characterization program by sampling other inorganic priority pollutants on a quarterly basis, and other organic priority pollutants, including dioxins and tributyltin once per year. These results are needed to perform reasonable potential analysis for next permit reissuance.

For Chronic Toxicity monitoring, the Discharger is allowed to use buffers in its test to control pH drift and ammonia toxicity. The Basin Plan (at Chapter 3, Un-ionized Ammonia) allows for exceptions to toxicity limits caused by unionized ammonia, so long as there is no toxicity in the receiving water after rapid dilution and degradation to a nontoxic state (ammonium). This exception is granted based on the Discharger's report that studies in the mid-1990's with *Ceriodaphnia dubia* confirmed that observed toxicity was due to ammonia caused by pH drift during static renewal testing. Use of the buffer in that case eliminated the toxicity. This allowance is further based on the Discharger conducting a Chronic Toxicity Screening Study in 2005 as part of the permit renewal process. In Phase 1 of the study, both of the most sensitive

species showed significant toxicity due to the likely presence of ammonia and upward pH drift. The tests were repeated in Phase 2 using both buffered and unbuffered samples. In the buffered samples the toxic effects were eliminated. The Discharger has also submitted a technical memorandum documenting that the ultimate ADWF of 119.1 MGD will result in receiving water unionized ammonia concentrations increasing from current level of 0.0104 to 0.0120 mg/L, which is well below the receiving water objective of 0.025 mg/L. Therefore, the Discharger has demonstrated that the beneficial uses of the receiving waters are protected through demonstration of compliance with applicable ammonia objectives.

C. Receiving Water Monitoring

1. Regional Monitoring Program (RMP)

   On April 15, 1992, the Regional Water Board adopted Resolution No. 92-043 directing the Executive Officer to implement the Regional Monitoring Program (RMP) for the San Francisco Bay. Subsequent to a public hearing and various meetings, Regional Water Board staff requested major permit holders in this region, under authority of section 13267 of California Water Code, to report on the water quality of the estuary. These permit holders responded to this request by participating in a collaborative effort, through the San Francisco Estuary Institute. This effort has come to be known as the San Francisco Bay Regional Monitoring Program for Trace Substances. This Order specifies that the Discharger shall continue to participate in the RMP, which involves collection of data on pollutants and toxicity in water, sediment and biota of the estuary.

2. Receiving water monitoring is not required in this Order pursuant to Regional Water Board Resolution 92-043 as described above. Since the Discharger's outfall structure is 4 miles offshore into the Bay, there are RMP stations near the discharge outfall, therefore, the Discharger is exempt from doing its own receiving water monitoring.

D. Pretreatment Monitoring Requirements

The U.S. EPA formally delegated the Pretreatment Program to the State Water Board and the Regional Water Board on September 22, 1989.

As of September 22, 1989, the Regional Water Board is the Approval Authority and is responsible for the review and approval of new and modified POTW Pretreatment Programs. Monitoring requirements in this permit are consistent with previous requirements.

When sampling periods coincide, one set of test results, reported separately, may be used for those parameters that are required to be monitored in both the Discharger's NPDES permit and the Pretreatment Program.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions (Provision VI.A)

Standard Provisions, which in accordance with 40 CFR §§122.41and 122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in **Attachments D and G** of this Order.

B. Monitoring and Reporting Requirements (Provision VI.B)

The Discharger is required to conduct monitoring of the permitted discharges in order to evaluate compliance with permit conditions. Monitoring requirements are contained in the the MRP **(Attachment E)**, Standard Provisions and SMP, Part A **(Attachment G)** of the Permit. This provision requires compliance with these documents, and is based on 40 CFR 122.63. The Standard Provisions and SMP, Part A are standard requirements in almost all NPDES permits issued by the Regional Water Board, including this Order. They contain definitions of terms, specify general sampling and analytical protocols, and set out requirements for reporting of spills, violations, and routine monitoring data in accordance with NPDES regulations, the California Water Code, and Regional Water Board policies. The MRP contains a sampling program specific for the facility. It defines the sampling stations and frequency, the pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all parameters for which effluent limitations are specified. Monitoring for additional constituents, for which no effluent limitations are established, is also required to provide data for future completion of RPAs for them.

C. Special Provisions (Provision VI.C)

1. Reopener Provisions.

These provisions are based on 40 CFR 123 and allow future modification of this Order and its effluent limitations as necessary in response to updated WQOs that may be established in the future.

2. Special Studies, Reports and Additional Reporting Requirements

a. Effluent Characterization Study: This Order does not include effluent limitations for the selected constituents addressed in the August 6, 2001 Letter that do not demonstrate Reasonable Potential, but this provision requires the Discharger to continue monitoring for these pollutants as described in the August 6, 2001 Letter and as specified in the MRP of this Order. If concentrations of these constituents increase significantly, the Discharger will be required to investigate the source of the increases and establish remedial measures, if the increases result in reasonable potential to cause or contribute to an excursion above the applicable WQO/WQC. This provision is based on the Basin Plan and the SIP 1.2 and 1.3. Furthermore, this information requirement is authorized by CWC section 13267 and 13383. Continued effluent characterization is necessary to track any change to the quality of the discharge to 1)

ensure that the limitations in this Order are protective in that all parameters that warrant limits are limited, and 2) provide a basis for establishing effluent limitations and requirement in the next NPDES permit reissuance. The Discharger is clearly responsible for providing the information. The frequency of monitoring is not onerous, and is reasonable and affordable for the relative size of the Discharger.

b. Ambient Background Receiving Water Study: This provision is based on the Basin Plan, the SIP, and the August 6, 2001 Letter for priority pollutant monitoring. As indicated in the permit, this requirement may be met by participating in the collaborative BACWA study. This information requirement is authorized by CWC section 13267 and 13383. Continued ambient background monitoring is necessary to track any changes in the quality of the receiving water so as to provide an up-to-date basis for establishing effluent limitations and requirements in the next NPDES permit reissuance. The Discharger is clearly responsible for providing this information. The frequency of monitoring is not onerous, and is reasonable and affordable for the relative size of the Discharger particularly since the Discharge has and will continue to participate in a cost sharing collaborative effort with other dischargers.

c. Permitted Treatment Plant Flows: The permitted average dry weather flow capacity of the treatment plant identified in Prohibition III.C. of this Order may be increased to 119.1 MGD by written approval from the Executive Officer, in accordance with the conditions outlined. This information requirement is authorized by CWC section 13267 and 13383 to ensure that after construction the plants are functioning as designed to meet applicable treatment standards and effluent limits. Such studies are common practice and are reasonable and affordable for the relative size of the Discharger.

d. Optional Mass Offset: This option is provided to encourage the Discharger to further implement aggressive reduction of mass loads to the Lower San Francisco Bay.

e. Status Report on 303(d)-Listed Pollutants, Site-Specific Objective and TMDL: This Order grants maximum compliance schedules based on the Basin Plan for mercury and cyanide that extends to 2010 because of work on the TMDL and SSO. It is appropriate for the Discharger to annually report on and track its efforts to support the TMDL and SSO. This report is authorized by SIP 2.2.1 and is necessary to comply with it. SIP 2.2.1 requires that the Regional Water Board establish interim requirements and dates, and that there be no more than one year between interim dates. Additionally, this requirement is authorized pursuant to CWC 13267 and 13383. The information required is minimal relative to the range of studies that could be required as a condition of being granted a compliance schedule. However, this minimal requirement is appropriate at this time because of ongoing region-wide efforts on TMDLs and SSOs supported by the Discharger that will result in appropriately protective objectives and allocations for the pollutants in question.

f. Study to Verify Protectiveness of Alternate Fecal Coliform Limits: This study is necessary to verify that the alternate fecal coliform limits in the Order continue to be

protective of beneficial uses. The basis is Basin Plan Table 4-2, footnote d. This information requirement is authorized by CWC section 13267 and 13383. The amount of monitoring required is reasonable and not overly burdensome since the Discharger had previously conducted more frequent monitoring for the past several years. And because of this record of data showing compliance with objectives, a reduced amount of monitoring with focused on worst case conditions will satisfy Basin Plan Table 4-2, footnote d.

3. Pollutant Minimization Program

This provision is based on Chapter 4 of the Basin Plan and Section 2.4.5 of the SIP. Furthermore, for mercury and cyanide, implementation of pollution minimization is based on Section 2.2.1 of the SIP because compliance schedules are granted for these two pollutants. For copper, the pollution prevention measures are to ensure compliance with antidegradation because the copper limits in this Order are numerically less stringent.

Additionally, on October 15, 2003, the Regional Water Board adopted Resolution R2-2003-0096 in support of a collaborative working approach between the Regional Water Board and the Bay Area Clean Water Agencies to promote Pollution Minimization Program development and excellence. Specifically, the Resolution embodies a set of eleven guiding principles that will be used to develop tools such as "P2 menus" for specific pollutants, as well as provide guidance in improving P2 program efficiency and accountability. Key principles in the Resolution include promoting watershed, cross-program and cross-media approaches to pollution prevention, and jointly developing tools to assess program performance that may include peer reviews, self-audits or other formats.

4. Requirement to Support SSO and TMDL, and Assure Compliance Schedules with Final Limits

Maximum allowable compliance schedules are granted to the Discharger for mercury and cyanide because of the uncertainty in the time it takes to complete the TMDL and SSO for these pollutants. Therefore, it is appropriate to require the Discharger to participate and support the development of the TMDL and SSO. For copper, this commitment is also necessary because data from the *North of Dumbarton Bridge Copper and Nickel Site-Specific Objective (SSO) Derivation (Clean Estuary Partnership March 2005)* suggest that the CTR criterion (3.1 µg/l) used in calculating the WQBELs in this Order will likely be lowered in the SSO (2.5 µg/l chronic and 3.9 µg/l acute). Since more generous WERs from this same SSO effort have been used in calculating the copper limits in this Order, it is appropriate for the Discharger to support the copper SSO effort to ensure the timely completion of the SSO to ensure the most appropriate limit for protection of beneficial uses. For mercury and cyanide, the requirement to submit a report of further measures to reduce these pollutants and ensure compliance with the final limits should the TMDL or SSO not be completed is based on the Basin Plan, Chapter 4 (Implementation of Effluent Limits, [F] Compliance Schedules). The Basin Plan states in part: "*The primary goal in setting compliance schedules is to promote the completion of source control and waste minimization measures.... Justification for compliance schedules will include...(c) a*

proposed schedule for additional source control measures or waste treatment." Additional source control or treatment was not thoroughly addressed in the Discharger's Infeasibility Study in recognition of ongoing TMDL and SSO efforts that would lead to different final WQBELs than those specified in this Order. However, should the TMDL and SSO not be completed in time, the Discharger will need to reduce its discharge concentrations to meet the final WQBELs in this Order. As such, this requirement is necessary to identify additional steps for the Discharger to take to comply with the final limits specified in this Order.

5. Construction, Operation, and Maintenance Specifications

a. Wastewater Facilities, Review and Evaluation, Status Reports: This provision is based on the previous permit and the Basin Plan.

b. Operations and Maintenance Manual, Review and Status Reports: This provision is based on the Basin Plan, the requirements of 40 CFR §122, and the previous permit.

c. Contingency Plan, Review and Status Reports: This provision is based on the Basin Plan, the requirements of 40 CFR §122, and the previous permit.

6. Special Provisions for POTWs

a. Pretreatment Program: This provision requires the Discharger (each member agency of EBDA) to implement and enforce its approved pretreatment program in accordance with Federal pretreatment regulations (40 CFR Part 403). Order No. 01-059 amended the Discharger's permit (as well as fourteen other dischargers' permits in the Region) to reflect the Regional Water Board's most recent pretreatment requirements. The requirements of this Order supersede Order No. 01-059, and are consistent with the requirements for other municipal facilities, with the exception of one provision for copper.

The added provision prohibiting a relaxation or removal of the local limit for copper is to ensure compliance with antidegradation policies.

b. Sludge Management Practices Requirements: This provision is based on the Basin Plan (Chapter IV) and 40 CFR §§257 and 503.

c. Sanitary Sewer Overflows and Sewer System Management Plan: This provision is to explain the Order's requirements as they relate to the Discharger's collection system, and to promote consistency with the State Water Resources Control Board adopted Statewide General Waste Discharge Requirements for Sanitary Sewer Overflow (SSO WDRs) and a related Monitoring and Reporting Program (Order No. 2006-0003-DWQ). The bases for these requirements are described elsewhere in this Fact Sheet for those requirements.

VIII. PUBLIC PARTICIPATION

The San Francisco Bay Regional Water Board is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the City of Livermore. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Dischargers and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the following the Argus, the Hayward Daily Review, and the Tri-Valley Herald, for one day prior to July 7, 2006.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments should be submitted either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this Order, **Attention: Lila Tang**.

To be fully responded to by staff and considered by the Regional Water Board, written comments must be received at the Regional Water Board offices **by 5:00 p.m. on July 12, 2006**

C. Public Hearing

The Regional Water Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date:	August 9, 2006
Time:	9:00 am
Location:	Elihu Harris State Office Building 1515 Clay Street, 1st Floor Auditorium Oakland, CA 94612
Contact:	Lila Tang, (510) 622-2425, email Ltang@waterboards.ca.gov

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our web address is www.waterboards.ca.gov/sanfranciscobay where you can access the current agenda for changes in dates and locations. Regional Water Board agenda package including staff's responses to written comments, and revised draft permit will be posted at this website no later than one week prior to the hearing date.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

E. Information and Copying.

The Report of Waste Discharge (ROWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m. except from noon to 1:00 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (510) 622-2300.

F. Register of Interested Persons.

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this Order should be directed to Lila Tang, 510-622-2425, email Ltang@waterboards.ca.gov.

IX. APPENDICES

Appendix F-1: Effluent Data for Priority Pollutants (inorganic and organic)
Appendix F-2: RPA Results for Priority Pollutants
Appendix F-3: Calculation of Final WQBELs
Appendix F-4: Receiving Water Bacteriological Data
Appendix F-5: General Basis for Final Compliance Dates
Appendix F-6: Mercury Mass Limit Calculation
Appendix F-7: Discharger's Feasibility Analysis

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
1	Antimony	01/02/02	<	5	µg/L
1	Antimony	02/06/02	<	5	µg/L
1	Antimony	03/06/02	<	5	µg/L
1	Antimony	04/03/02	<	5	µg/L
1	Antimony	05/01/02	<	5	µg/L
1	Antimony	06/05/02	<	5	µg/L
1	Antimony	07/10/02	<	5	µg/L
1	Antimony	08/07/02	<	5	µg/L
1	Antimony	09/04/02	<	5	µg/L
1	Antimony	10/02/02	<	5	µg/L
1	Antimony	11/06/02	<	5	µg/L
1	Antimony	12/04/02	<	5	µg/L
1	Antimony	01/08/03	<	5	µg/L
1	Antimony	02/05/03	<	5	µg/L
1	Antimony	08/06/03	<	5	µg/L
1	Antimony	02/04/04	<	5	µg/L
1	Antimony	08/04/04	<	4	µg/L
2	Arsenic	01/02/02	=	1.7	µg/L
2	Arsenic	02/06/02	J	0.9	µg/L
2	Arsenic	03/06/02	=	1	µg/L
2	Arsenic	04/03/02	J	0.8	µg/L
2	Arsenic	05/01/02	=	1	µg/L
2	Arsenic	06/05/02	=	1	µg/L
2	Arsenic	07/10/02	J	0.8	µg/L
2	Arsenic	08/07/02	J	0.9	µg/L
2	Arsenic	09/04/02	J	0.7	µg/L
2	Arsenic	10/02/02	J	0.8	µg/L
2	Arsenic	11/06/02	J	0.7	µg/L
2	Arsenic	12/04/02	J	0.8	µg/L
2	Arsenic	01/08/03	J	1	µg/L
2	Arsenic	02/05/03	J	0.8	µg/L
2	Arsenic	03/05/03	J	0.9	µg/L
2	Arsenic	04/02/03	=	1.2	µg/L
2	Arsenic	05/07/03	=	1	µg/L
2	Arsenic	06/04/03	=	1.2	µg/L
2	Arsenic	07/02/03	=	1	µg/L
2	Arsenic	08/06/03	J	0.8	µg/L
2	Arsenic	09/04/03	J	0.8	µg/L
2	Arsenic	10/01/03	=	1	µg/L
2	Arsenic	11/05/03	J	0.9	µg/L
2	Arsenic	12/03/03	J	0.9	µg/L
2	Arsenic	01/07/04	=	1.1	µg/L
2	Arsenic	02/04/04	=	1.4	µg/L
2	Arsenic	03/03/04	=	1.3	µg/L
2	Arsenic	04/07/04	J	0.9	µg/L
2	Arsenic	05/05/04	J	0.9	µg/L
2	Arsenic	06/02/04	J	0.9	µg/L
2	Arsenic	07/07/04	=	1	µg/L
2	Arsenic	08/04/04	J	0.8	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
2	Arsenic	09/01/04	J	0.5	µg/L
2	Arsenic	10/06/04	J	0.8	µg/L
2	Arsenic	11/03/04	J	0.9	µg/L
2	Arsenic	12/01/04	J	0.7	µg/L
3	Beryllium	02/06/02	<	0.04	µg/L
3	Beryllium	08/07/02	<	0.04	µg/L
3	Beryllium	02/05/03	<	0.04	µg/L
3	Beryllium	08/06/03	<	0.04	µg/L
3	Beryllium	02/04/04	<	0.04	µg/L
3	Beryllium	08/04/04	J	0.052	µg/L
4	Cadmium	01/02/02	J	0.13	µg/L
4	Cadmium	02/06/02	J	0.14	µg/L
4	Cadmium	03/06/02	J	0.12	µg/L
4	Cadmium	04/03/02	J	0.22	µg/L
4	Cadmium	05/01/02	J	0.3	µg/L
4	Cadmium	06/05/02	J	0.1	µg/L
4	Cadmium	07/10/02	<	0.07	µg/L
4	Cadmium	08/07/02	J	0.19	µg/L
4	Cadmium	09/04/02	J	0.14	µg/L
4	Cadmium	10/02/02	J	0.24	µg/L
4	Cadmium	11/06/02	J	0.13	µg/L
4	Cadmium	12/04/02	J	0.12	µg/L
4	Cadmium	01/08/03	J	0.12	µg/L
4	Cadmium	02/05/03	J	0.9	µg/L
4	Cadmium	03/05/03	J	0.14	µg/L
4	Cadmium	04/02/03	J	0.13	µg/L
4	Cadmium	05/07/03	J	0.08	µg/L
4	Cadmium	06/04/03	J	0.08	µg/L
4	Cadmium	07/02/03	J	0.09	µg/L
4	Cadmium	08/06/03	J	0.25	µg/L
4	Cadmium	09/04/03	J	0.18	µg/L
4	Cadmium	10/01/03	J	0.13	µg/L
4	Cadmium	11/05/03	J	0.09	µg/L
4	Cadmium	12/03/03	J	0.13	µg/L
4	Cadmium	01/07/04	J	0.22	µg/L
4	Cadmium	02/04/04	J	0.12	µg/L
4	Cadmium	03/03/04	J	0.12	µg/L
4	Cadmium	04/07/04	J	0.32	µg/L
4	Cadmium	05/05/04	J	0.09	µg/L
4	Cadmium	06/02/04	J	0.16	µg/L
4	Cadmium	07/07/04	J	0.14	µg/L
4	Cadmium	08/04/04	J	0.21	µg/L
4	Cadmium	09/01/04	J	0.14	µg/L
4	Cadmium	10/06/04	J	0.1	µg/L
4	Cadmium	11/03/04	J	0.19	µg/L
4	Cadmium	12/01/04	J	0.13	µg/L
5	Chromium	01/02/02	=	1.5	µg/L
5	Chromium	02/06/02	=	1.8	µg/L
5	Chromium	03/06/02	=	1.9	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
5	Chromium	04/03/02	=	1.3	µg/L
5	Chromium	05/01/02	=	1.2	µg/L
5	Chromium	06/05/02	J	0.97	µg/L
5	Chromium	07/10/02	J	0.98	µg/L
5	Chromium	08/07/02	<	0.90	µg/L
5	Chromium	09/04/02	=	1.5	µg/L
5	Chromium	10/02/02	=	1.8	µg/L
5	Chromium	11/06/02	<	0.90	µg/L
5	Chromium	12/04/02	=	1.4	µg/L
5	Chromium	01/08/03	=	1.1	µg/L
5	Chromium	02/05/03	=	1.5	µg/L
5	Chromium	03/05/03	=	1.1	µg/L
5	Chromium	04/02/03	=	1.8	µg/L
5	Chromium	05/07/03	=	1.6	µg/L
5	Chromium	06/04/03	=	1.3	µg/L
5	Chromium	07/02/03	=	1.4	µg/L
5	Chromium	08/06/03	=	1.1	µg/L
5	Chromium	09/04/03	J	0.95	µg/L
5	Chromium	10/01/03	=	1.2	µg/L
5	Chromium	11/05/03	J	0.99	µg/L
5	Chromium	12/03/03	J	0.99	µg/L
5	Chromium	01/07/04	=	1.1	µg/L
5	Chromium	02/04/04	=	1.5	µg/L
5	Chromium	03/03/04	=	1.6	µg/L
5	Chromium	04/07/04	=	1.1	µg/L
5	Chromium	05/05/04	=	1.0	µg/L
5	Chromium	06/02/04	J	1.9	µg/L
5	Chromium	07/07/04	=	1.3	µg/L
5	Chromium	08/04/04	=	1.4	µg/L
5	Chromium	09/01/04	J	0.92	µg/L
5	Chromium	10/06/04	J	0.91	µg/L
5	Chromium	11/03/04	J	0.99	µg/L
5	Chromium	12/01/04	J	0.94	µg/L
6	Copper	01/02/02	=	13.9	µg/L
6	Copper	02/06/02	=	13.7	µg/L
6	Copper	03/06/02	=	12.2	µg/L
6	Copper	04/03/02	=	13.8	µg/L
6	Copper	05/01/02	=	14.4	µg/L
6	Copper	06/05/02	=	15.8	µg/L
6	Copper	07/10/02	J	10.0	µg/L
6	Copper	08/07/02	=	12.7	µg/L
6	Copper	09/04/02	=	10.5	µg/L
6	Copper	10/02/02	=	11.9	µg/L
6	Copper	11/06/02	=	11.9	µg/L
6	Copper	12/04/02	=	9.03	µg/L
6	Copper	01/08/03	=	11.6	µg/L
6	Copper	02/05/03	=	13.8	µg/L
6	Copper	03/05/03	=	10.3	µg/L
6	Copper	04/02/03	=	15.8	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
6	Copper	05/07/03	=	14.3	µg/L
6	Copper	06/04/03	=	17.0	µg/L
6	Copper	07/02/03	=	14.6	µg/L
6	Copper	08/06/03	=	13.4	µg/L
6	Copper	09/04/03	=	12.8	µg/L
6	Copper	10/01/03	=	18.3	µg/L
6	Copper	11/05/03	=	12.5	µg/L
6	Copper	12/03/03	=	11.0	µg/L
6	Copper	01/07/04	=	12.2	µg/L
6	Copper	02/04/04	=	12.6	µg/L
6	Copper	03/03/04	=	11.7	µg/L
6	Copper	04/07/04	=	12.8	µg/L
6	Copper	05/05/04	=	13.9	µg/L
6	Copper	06/02/04	<	7.7	µg/L
6	Copper	07/07/04	=	15.3	µg/L
6	Copper	08/04/04	=	14.8	µg/L
6	Copper	09/01/04	<	5.5	µg/L
6	Copper	10/06/04	=	12.9	µg/L
6	Copper	11/03/04	=	6.31	µg/L
6	Copper	12/01/04	=	13.3	µg/L
7	Lead	01/02/02	<	0.9	µg/L
7	Lead	02/06/02	<	0.9	µg/L
7	Lead	03/06/02	J	1.2	µg/L
7	Lead	04/03/02	=	2	µg/L
7	Lead	05/01/02	J	1.3	µg/L
7	Lead	06/05/02	<	0.9	µg/L
7	Lead	07/10/02	<	0.9	µg/L
7	Lead	08/07/02	<	0.9	µg/L
7	Lead	09/04/02	J	1.3	µg/L
7	Lead	10/02/02	<	0.9	µg/L
7	Lead	11/06/02	<	0.9	µg/L
7	Lead	12/04/02	J	1.1	µg/L
7	Lead	01/08/03	<	0.9	µg/L
7	Lead	02/05/03	<	0.9	µg/L
7	Lead	03/05/03	J	1	µg/L
7	Lead	04/02/03	<	0.9	µg/L
7	Lead	05/07/03	<	0.9	µg/L
7	Lead	06/04/03	<	0.9	µg/L
7	Lead	07/02/03	J	1.2	µg/L
7	Lead	08/06/03	J	1.4	µg/L
7	Lead	09/04/03	<	0.9	µg/L
7	Lead	10/01/03	<	0.9	µg/L
7	Lead	11/05/03	J	1.9	µg/L
7	Lead	12/03/03	=	3.5	µg/L
7	Lead	01/07/04	J	1.1	µg/L
7	Lead	02/04/04	=	4	µg/L
7	Lead	03/03/04	=	3.7	µg/L
7	Lead	04/07/04	=	3.1	µg/L
7	Lead	05/05/04	=	4.4	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
7	Lead	06/02/04	<	0.8	µg/L
7	Lead	07/07/04	<	0.8	µg/L
7	Lead	08/04/04	=	4.6	µg/L
7	Lead	09/01/04	=	6	µg/L
7	Lead	10/06/04	=	6.2	µg/L
7	Lead	11/03/04	=	4.2	µg/L
7	Lead	12/01/04	=	3.9	µg/L
8	Mercury	01/02/02	=	0.038	µg/L
8	Mercury	02/06/02	=	0.025	µg/L
8	Mercury	03/06/02	=	0.020	µg/L
8	Mercury	04/03/02	=	0.038	µg/L
8	Mercury	05/01/02	=	0.026	µg/L
8	Mercury	06/05/02	=	0.03	µg/L
8	Mercury	07/10/02	=	0.033	µg/L
8	Mercury	08/07/02	=	0.04	µg/L
8	Mercury	09/04/02	=	0.031	µg/L
8	Mercury	10/02/02	=	0.024	µg/L
8	Mercury	11/06/02	=	0.019	µg/L
8	Mercury	12/04/02	=	0.023	µg/L
8	Mercury	01/08/03	=	0.019	µg/L
8	Mercury	02/05/03	=	0.029	µg/L
8	Mercury	03/05/03	=	0.023	µg/L
8	Mercury	04/02/03	=	0.032	µg/L
8	Mercury	05/07/03	=	0.049	µg/L
8	Mercury	06/04/03	=	0.017	µg/L
8	Mercury	07/02/03	=	0.019	µg/L
8	Mercury	08/06/03	=	0.013	µg/L
8	Mercury	09/04/03	=	0.016	µg/L
8	Mercury	10/01/03	=	0.019	µg/L
8	Mercury	11/05/03	=	0.0149	µg/L
8	Mercury	12/03/03	=	0.00866	µg/L
8	Mercury	01/07/04	=	0.014	µg/L
8	Mercury	02/04/04	=	0.024	µg/L
8	Mercury	03/03/04	=	0.0167	µg/L
8	Mercury	04/07/04	=	0.0139	µg/L
8	Mercury	05/05/04	=	0.0123	µg/L
8	Mercury	06/02/04	=	0.0142	µg/L
8	Mercury	07/07/04	=	0.0182	µg/L
8	Mercury	08/04/04	=	0.0145	µg/L
8	Mercury	09/01/04	=	0.035	µg/L
8	Mercury	10/06/04	=	0.0144	µg/L
8	Mercury	11/03/04	=	0.0161	µg/L
8	Mercury	12/01/04	=	0.0111	µg/L
9	Nickel	01/02/02	=	5.5	µg/L
9	Nickel	02/06/02	<	5.0	µg/L
9	Nickel	03/06/02	<	5.0	µg/L
9	Nickel	04/03/02	=	6.7	µg/L
9	Nickel	05/01/02	=	9.0	µg/L
9	Nickel	06/05/02	<	5.0	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
9	Nickel	07/10/02	=	5.1	µg/L
9	Nickel	08/07/02	=	7.5	µg/L
9	Nickel	09/04/02	=	5.3	µg/L
9	Nickel	10/02/02	<	5.0	µg/L
9	Nickel	11/06/02	<	5.0	µg/L
9	Nickel	12/04/02	<	5.0	µg/L
9	Nickel	01/08/03	=	8.4	µg/L
9	Nickel	02/05/03	=	9.1	µg/L
9	Nickel	03/05/03	<	5.0	µg/L
9	Nickel	04/02/03	=	5.7	µg/L
9	Nickel	05/07/03	=	6.0	µg/L
9	Nickel	06/04/03	=	8.2	µg/L
9	Nickel	07/02/03	=	6.6	µg/L
9	Nickel	08/06/03	=	7.4	µg/L
9	Nickel	09/04/03	<	5.0	µg/L
9	Nickel	10/01/03	=	5.8	µg/L
9	Nickel	11/05/03	=	5.9	µg/L
9	Nickel	12/03/03	<	5.0	µg/L
9	Nickel	01/07/04	=	5.6	µg/L
9	Nickel	02/04/04	=	5.4	µg/L
9	Nickel	03/03/04	=	5.5	µg/L
9	Nickel	04/07/04	<	5.0	µg/L
9	Nickel	05/05/04	<	5.0	µg/L
9	Nickel	06/02/04	J	4.1	µg/L
9	Nickel	07/07/04	J	3.8	µg/L
9	Nickel	08/04/04	=	6.1	µg/L
9	Nickel	09/01/04	=	15.0	µg/L
9	Nickel	10/06/04	J	3.3	µg/L
9	Nickel	11/03/04	J	2.9	µg/L
9	Nickel	12/01/04	=	5.0	µg/L
10	Selenium	01/02/02	J	0.70	µg/L
10	Selenium	02/06/02	J	0.60	µg/L
10	Selenium	03/06/02	J	0.40	µg/L
10	Selenium	04/03/02	=	1.4	µg/L
10	Selenium	05/01/02	J	0.50	µg/L
10	Selenium	06/05/02	J	0.70	µg/L
10	Selenium	07/10/02	J	0.60	µg/L
10	Selenium	08/07/02	J	0.70	µg/L
10	Selenium	09/04/02	J	0.40	µg/L
10	Selenium	10/02/02	J	0.40	µg/L
10	Selenium	11/06/02	J	0.30	µg/L
10	Selenium	12/04/02	J	0.50	µg/L
10	Selenium	01/08/03	J	0.60	µg/L
10	Selenium	02/05/03	J	0.50	µg/L
10	Selenium	03/05/03	J	0.60	µg/L
10	Selenium	04/02/03	J	0.50	µg/L
10	Selenium	05/07/03	J	0.40	µg/L
10	Selenium	06/04/03	J	0.50	µg/L
10	Selenium	07/02/03	J	0.50	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
10	Selenium	08/06/03	J	0.60	µg/L
10	Selenium	09/04/03	J	0.40	µg/L
10	Selenium	10/01/03	J	0.40	µg/L
10	Selenium	11/05/03	J	0.50	µg/L
10	Selenium	12/03/03	J	0.70	µg/L
10	Selenium	01/07/04	J	0.70	µg/L
10	Selenium	02/04/04	J	0.80	µg/L
10	Selenium	03/03/04	J	0.70	µg/L
10	Selenium	04/07/04	J	0.60	µg/L
10	Selenium	05/05/04	J	0.50	µg/L
10	Selenium	06/02/04	J	0.50	µg/L
10	Selenium	07/07/04	J	0.50	µg/L
10	Selenium	08/04/04	J	0.60	µg/L
10	Selenium	09/01/04	J	0.30	µg/L
10	Selenium	10/06/04	J	0.40	µg/L
10	Selenium	11/03/04	J	0.30	µg/L
10	Selenium	12/01/04	J	0.60	µg/L
11	Silver	01/02/02	J	0.46	µg/L
11	Silver	02/06/02	J	0.66	µg/L
11	Silver	03/06/02	J	0.73	µg/L
11	Silver	04/03/02	J	0.64	µg/L
11	Silver	05/01/02	J	0.56	µg/L
11	Silver	06/05/02	J	0.18	µg/L
11	Silver	07/10/02	J	0.33	µg/L
11	Silver	08/07/02	J	0.46	µg/L
11	Silver	09/04/02	J	0.17	µg/L
11	Silver	10/02/02	J	0.44	µg/L
11	Silver	11/06/02	J	0.77	µg/L
11	Silver	12/04/02	J	0.45	µg/L
11	Silver	01/08/03	J	0.52	µg/L
11	Silver	02/05/03	J	0.45	µg/L
11	Silver	03/05/03	J	0.51	µg/L
11	Silver	04/02/03	J	0.51	µg/L
11	Silver	05/07/03	J	0.34	µg/L
11	Silver	06/04/03	J	0.57	µg/L
11	Silver	07/02/03	J	0.48	µg/L
11	Silver	08/06/03	J	0.37	µg/L
11	Silver	09/04/03	J	0.69	µg/L
11	Silver	10/01/03	J	0.32	µg/L
11	Silver	11/05/03	J	0.82	µg/L
11	Silver	12/03/03	J	0.64	µg/L
11	Silver	01/07/04	J	0.42	µg/L
11	Silver	02/04/04	J	0.42	µg/L
11	Silver	03/03/04	J	0.49	µg/L
11	Silver	04/07/04	J	0.54	µg/L
11	Silver	05/05/04	J	0.41	µg/L
11	Silver	06/02/04	J	0.38	µg/L
11	Silver	07/07/04	J	0.20	µg/L
11	Silver	08/04/04	J	0.30	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
11	Silver	09/01/04	J	0.19	µg/L
11	Silver	10/06/04	J	0.31	µg/L
11	Silver	11/03/04	J	0.32	µg/L
11	Silver	12/01/04	J	0.44	µg/L
12	Thallium	01/02/02	<	3	µg/L
12	Thallium	02/06/02	<	3	µg/L
12	Thallium	03/06/02	<	3	µg/L
12	Thallium	04/03/02	<	3	µg/L
12	Thallium	05/01/02	<	3	µg/L
12	Thallium	06/05/02	<	3	µg/L
12	Thallium	07/10/02	<	3	µg/L
12	Thallium	08/07/02	<	3	µg/L
12	Thallium	09/04/02	<	3	µg/L
12	Thallium	10/02/02	<	3	µg/L
12	Thallium	11/06/02	<	3	µg/L
12	Thallium	12/04/02	<	3	µg/L
12	Thallium	01/08/03	<	3	µg/L
12	Thallium	02/05/03	<	3	µg/L
12	Thallium	08/06/03	<	0.03	µg/L
12	Thallium	02/04/04	<	0.23	µg/L
12	Thallium	08/04/04	J	0.31	µg/L
13	Zinc	01/02/02	=	54	µg/L
13	Zinc	02/06/02	=	60.8	µg/L
13	Zinc	03/06/02	=	38.1	µg/L
13	Zinc	04/03/02	=	51.9	µg/L
13	Zinc	05/01/02	=	62.8	µg/L
13	Zinc	06/05/02	=	40.6	µg/L
13	Zinc	07/10/02	=	36.4	µg/L
13	Zinc	08/07/02	=	53.2	µg/L
13	Zinc	09/04/02	=	32.2	µg/L
13	Zinc	10/02/02	=	36.6	µg/L
13	Zinc	11/06/02	=	40.0	µg/L
13	Zinc	12/04/02	=	35.9	µg/L
13	Zinc	01/08/03	=	31.8	µg/L
13	Zinc	02/05/03	=	33.5	µg/L
13	Zinc	03/05/03	=	35.9	µg/L
13	Zinc	04/02/03	=	35.9	µg/L
13	Zinc	05/07/03	=	40.6	µg/L
13	Zinc	06/04/03	=	37.6	µg/L
13	Zinc	07/02/03	=	43.1	µg/L
13	Zinc	08/06/03	=	50.7	µg/L
13	Zinc	09/04/03	=	33.9	µg/L
13	Zinc	10/01/03	=	193	µg/L
13	Zinc	11/05/03	=	32.7	µg/L
13	Zinc	12/03/03	=	32.9	µg/L
13	Zinc	01/07/04	=	35.5	µg/L
13	Zinc	02/04/04	=	34	µg/L
13	Zinc	03/03/04	=	35.2	µg/L
13	Zinc	04/07/04	=	35.5	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
13	Zinc	05/05/04	=	56.6	µg/L
13	Zinc	06/02/04	=	38.1	µg/L
13	Zinc	07/07/04	=	33.0	µg/L
13	Zinc	08/04/04	=	94.9	µg/L
13	Zinc	09/01/04	=	30.2	µg/L
13	Zinc	10/06/04	=	45	µg/L
13	Zinc	11/03/04	=	45.4	µg/L
13	Zinc	12/01/04	=	44.5	µg/L
14	Cyanide	01/02/02	J	4.0	µg/L
14	Cyanide	02/06/02	<	3.0	µg/L
14	Cyanide	03/06/02	<	3.0	µg/L
14	Cyanide	04/03/02	J	3.0	µg/L
14	Cyanide	05/01/02	<	3.0	µg/L
14	Cyanide	06/05/02	J	6.0	µg/L
14	Cyanide	07/10/02	<	3.0	µg/L
14	Cyanide	08/07/02	J	4.0	µg/L
14	Cyanide	09/04/02	J	4.0	µg/L
14	Cyanide	10/02/02	J	5.0	µg/L
14	Cyanide	11/06/02	J	6.0	µg/L
14	Cyanide	12/04/02	<	3.0	µg/L
14	Cyanide	01/08/03	J	5.0	µg/L
14	Cyanide	02/05/03	J	3.0	µg/L
14	Cyanide	03/05/03	<	3.0	µg/L
14	Cyanide	04/02/03	J	4.0	µg/L
14	Cyanide	05/07/03	<	3.0	µg/L
14	Cyanide	06/04/03	J	4.0	µg/L
14	Cyanide	07/02/03	<	3.0	µg/L
14	Cyanide	08/06/03	=	6.2	µg/L
14	Cyanide	09/04/03	J	4.0	µg/L
14	Cyanide	10/01/03	<	3.0	µg/L
14	Cyanide	11/05/03	<	3.0	µg/L
14	Cyanide	12/03/03	<	3.0	µg/L
14	Cyanide	01/07/04	<	3.0	µg/L
14	Cyanide	02/04/04	<	3.0	µg/L
14	Cyanide	03/03/04	<	3.0	µg/L
14	Cyanide	04/07/04	<	3.0	µg/L
14	Cyanide	05/05/04	<	3.0	µg/L
14	Cyanide	06/02/04	<	3.0	µg/L
14	Cyanide	07/07/04	<	3.0	µg/L
14	Cyanide	08/04/04	<	3.0	µg/L
14	Cyanide	09/01/04	<	3.0	µg/L
14	Cyanide	10/06/04	<	3.0	µg/L
14	Cyanide	11/03/04	<	3.0	µg/L
14	Cyanide	12/01/04	<	3.0	µg/L
16	2,3,7,8-TCDD	02/06/02	<	9.6	pg/L
16	2,3,7,8-TCDD	08/07/02	<	9.9	pg/L
16	2,3,7,8-TCDD	02/05/03	<	9.7	pg/L
16	2,3,7,8-TCDD	08/06/03	<	9.9	pg/L
16	2,3,7,8-TCDD	02/04/04	<	9.6	pg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
16	2,3,7,8-TCDD	08/04/04	<	9.5	pg/L
	Dioxin TEQ	02/06/02		0	pg/L
	Dioxin TEQ	08/07/02		0	pg/L
	Dioxin TEQ	02/05/03		0	pg/L
	Dioxin TEQ	08/06/03		0	pg/L
	Dioxin TEQ	02/04/04		0	pg/L
	Dioxin TEQ	08/04/04		0	pg/L
17	Acrolein	02/06/02	<	5	µg/L
17	Acrolein	08/07/02	<	5	µg/L
17	Acrolein	02/05/03	<	5	µg/L
17	Acrolein	08/06/03	<	5	µg/L
18	Acrylonitrile	02/06/02	<	1	µg/L
18	Acrylonitrile	08/07/02	<	1	µg/L
18	Acrylonitrile	02/05/03	<	1	µg/L
18	Acrylonitrile	08/06/03	<	1	µg/L
18	Acrylonitrile	02/04/04	<	1	µg/L
18	Acrylonitrile	08/04/04	<	1	µg/L
19	Benzene	02/06/02	<	0.05	µg/L
19	Benzene	08/07/02	<	0.05	µg/L
19	Benzene	02/05/03	<	0.05	µg/L
19	Benzene	08/06/03	<	0.05	µg/L
19	Benzene	02/04/04	<	0.05	µg/L
19	Benzene	08/04/04	<	0.05	µg/L
20	Bromoform	02/06/02	<	0.1	µg/L
20	Bromoform	08/07/02	<	0.1	µg/L
20	Bromoform	02/05/03	<	0.1	µg/L
20	Bromoform	08/06/03	<	0.1	µg/L
20	Bromoform	02/04/04	<	0.1	µg/L
20	Bromoform	08/04/04	<	0.1	µg/L
21	Carbon tetrachloride	02/06/02	<	0.14	µg/L
21	Carbon tetrachloride	08/07/02	<	0.14	µg/L
21	Carbon tetrachloride	02/05/03	<	0.14	µg/L
21	Carbon tetrachloride	08/06/03	<	0.14	µg/L
21	Carbon tetrachloride	02/04/04	<	0.14	µg/L
21	Carbon tetrachloride	08/04/04	<	0.14	µg/L
22	Chlorobenzene	02/06/02	<	0.05	µg/L
22	Chlorobenzene	08/07/02	<	0.05	µg/L
22	Chlorobenzene	02/05/03	<	0.05	µg/L
22	Chlorobenzene	08/06/03	<	0.05	µg/L
22	Chlorobenzene	02/04/04	<	0.05	µg/L
22	Chlorobenzene	08/04/04	<	0.05	µg/L
23	Chlorodibromomethane	02/06/02	J	0.17	µg/L
23	Chlorodibromomethane	08/07/02	<	0.06	µg/L
23	Chlorodibromomethane	02/05/03	<	0.06	µg/L
23	Chlorodibromomethane	08/06/03	<	0.06	µg/L
23	Chlorodibromomethane	02/04/04	<	0.06	µg/L
23	Chlorodibromomethane	08/04/04	<	0.06	µg/L
24	Chloroethane	02/06/02	<	0.19	µg/L
24	Chloroethane	08/07/02	<	0.19	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
24	Chloroethane	02/05/03	<	0.19	µg/L
24	Chloroethane	08/06/03	<	0.19	µg/L
24	Chloroethane	02/04/04	<	0.19	µg/L
24	Chloroethane	08/04/04	<	0.19	µg/L
25	2-Chloroethylvinylether	02/06/02	<	0.1	µg/L
25	2-Chloroethylvinylether	08/07/02	<	0.1	µg/L
25	2-Chloroethylvinylether	02/05/03	<	0.1	µg/L
25	2-Chloroethylvinylether	08/06/03	<	0.1	µg/L
25	2-Chloroethylvinylether	02/04/04	<	0.1	µg/L
25	2-Chloroethylvinylether	08/04/04	<	0.1	µg/L
26	Chloroform	02/06/02	J	1.7	µg/L
26	Chloroform	08/07/02	J	1.5	µg/L
26	Chloroform	02/05/03	=	2.6	µg/L
26	Chloroform	08/06/03	J	1.9	µg/L
26	Chloroform	02/04/04	J	1.9	µg/L
26	Chloroform	08/04/04	J	1.2	µg/L
27	Dichlorobromomethane	02/06/02	J	0.21	µg/L
27	Dichlorobromomethane	08/07/02	J	0.12	µg/L
27	Dichlorobromomethane	02/05/03	J	0.24	µg/L
27	Dichlorobromomethane	08/06/03	<	0.04	µg/L
27	Dichlorobromomethane	02/04/04	J	0.19	µg/L
27	Dichlorobromomethane	08/04/04	<	0.04	µg/L
28	1,1-Dichloroethane	02/06/02	<	0.07	µg/L
28	1,1-Dichloroethane	08/07/02	<	0.07	µg/L
28	1,1-Dichloroethane	02/05/03	<	0.07	µg/L
28	1,1-Dichloroethane	08/06/03	<	0.07	µg/L
28	1,1-Dichloroethane	02/04/04	<	0.07	µg/L
28	1,1-Dichloroethane	08/04/04	<	0.07	µg/L
29	1,2-Dichloroethane	02/06/02	<	0.06	µg/L
29	1,2-Dichloroethane	08/07/02	<	0.06	µg/L
29	1,2-Dichloroethane	02/05/03	<	0.06	µg/L
29	1,2-Dichloroethane	08/06/03	<	0.06	µg/L
29	1,2-Dichloroethane	02/04/04	<	0.06	µg/L
29	1,2-Dichloroethane	08/04/04	<	0.06	µg/L
30	1,1-Dichloroethylene	02/06/02	<	0.05	µg/L
30	1,1-Dichloroethylene	08/07/02	<	0.05	µg/L
30	1,1-Dichloroethylene	02/05/03	<	0.05	µg/L
30	1,1-Dichloroethylene	08/06/03	<	0.05	µg/L
30	1,1-Dichloroethylene	02/04/04	<	0.05	µg/L
30	1,1-Dichloroethylene	08/04/04	<	0.05	µg/L
31	1,2-Dichloropropane	02/06/02	<	0.12	µg/L
31	1,2-Dichloropropane	08/07/02	<	0.12	µg/L
31	1,2-Dichloropropane	02/05/03	<	0.12	µg/L
31	1,2-Dichloropropane	08/06/03	<	0.12	µg/L
31	1,2-Dichloropropane	02/04/04	<	0.12	µg/L
31	1,2-Dichloropropane	08/04/04	<	0.12	µg/L
32	1,3-Dichloropropylene	02/06/02	<	0.07	µg/L
32	1,3-Dichloropropylene	08/07/02	<	0.07	µg/L
32	1,3-Dichloropropylene	02/05/03	<	0.07	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date	Result		Units
32	1,3-Dichloropropylene	08/06/03	<	0.07	µg/L
32	1,3-Dichloropropylene	02/04/04	<	0.07	µg/L
32	1,3-Dichloropropylene	08/04/04	<	0.07	µg/L
33	Ethylbenzene	02/06/02	<	0.08	µg/L
33	Ethylbenzene	08/07/02	<	0.08	µg/L
33	Ethylbenzene	02/05/03	<	0.08	µg/L
33	Ethylbenzene	08/06/03	<	0.08	µg/L
33	Ethylbenzene	02/04/04	<	0.08	µg/L
33	Ethylbenzene	08/04/04	<	0.08	µg/L
34	Methyl bromide	02/06/02	<	0.21	µg/L
34	Methyl bromide	08/07/02	<	0.21	µg/L
34	Methyl bromide	02/05/03	<	0.21	µg/L
34	Methyl bromide	08/06/03	<	0.21	µg/L
34	Methyl bromide	02/04/04	<	0.21	µg/L
34	Methyl bromide	08/04/04	<	0.21	µg/L
35	Methyl chloride	02/06/02	<	0.1	µg/L
35	Methyl chloride	08/07/02	<	0.1	µg/L
35	Methyl chloride	02/05/03	<	0.1	µg/L
35	Methyl chloride	08/06/03	J	0.63	µg/L
35	Methyl chloride	02/04/04	<	0.1	µg/L
35	Methyl chloride	08/04/04	<	0.1	µg/L
36	Methylene chloride	02/06/02	J	1.2	µg/L
36	Methylene chloride	08/07/02	J	0.21	µg/L
36	Methylene chloride	02/05/03	J	0.57	µg/L
36	Methylene chloride	08/06/03	J	0.19	µg/L
36	Methylene chloride	02/04/04	J	0.93	µg/L
36	Methylene chloride	08/04/04	J	0.41	µg/L
37	1,1,2,2-Tetrachloroethane	02/06/02	<	0.11	µg/L
37	1,1,2,2-Tetrachloroethane	08/07/02	<	0.11	µg/L
37	1,1,2,2-Tetrachloroethane	02/05/03	<	0.11	µg/L
37	1,1,2,2-Tetrachloroethane	08/06/03	<	0.11	µg/L
37	1,1,2,2-Tetrachloroethane	02/04/04	<	0.11	µg/L
37	1,1,2,2-Tetrachloroethane	08/04/04	<	0.11	µg/L
38	Tetrachloroethylene	02/06/02	<	0.11	µg/L
38	Tetrachloroethylene	08/07/02	<	0.11	µg/L
38	Tetrachloroethylene	02/05/03	<	0.11	µg/L
38	Tetrachloroethylene	08/06/03	<	0.11	µg/L
38	Tetrachloroethylene	02/04/04	<	0.11	µg/L
38	Tetrachloroethylene	08/04/04	<	0.11	µg/L
39	Toluene	02/06/02	J	1.1	µg/L
39	Toluene	08/07/02	J	1.6	µg/L
39	Toluene	02/05/03	J	1.1	µg/L
39	Toluene	08/06/03	J	0.77	µg/L
39	Toluene	02/04/04	J	1.2	µg/L
39	Toluene	08/04/04	J	0.57	µg/L
40	1,2-trans-Dichloroethylene	02/06/02	<	0.14	µg/L
40	1,2-trans-Dichloroethylene	08/07/02	<	0.14	µg/L
40	1,2-trans-Dichloroethylene	02/05/03	<	0.14	µg/L
40	1,2-trans-Dichloroethylene	08/06/03	<	0.14	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
40	1,2-trans-Dichloroethylene	02/04/04	<	0.14	µg/L
40	1,2-trans-Dichloroethylene	08/04/04	<	0.14	µg/L
41	1,1,1-Trichloroethane	02/06/02	<	0.08	µg/L
41	1,1,1-Trichloroethane	08/07/02	<	0.08	µg/L
41	1,1,1-Trichloroethane	02/05/03	<	0.08	µg/L
41	1,1,1-Trichloroethane	08/06/03	<	0.08	µg/L
41	1,1,1-Trichloroethane	02/04/04	<	0.08	µg/L
41	1,1,1-Trichloroethane	08/04/04	<	0.08	µg/L
42	1,1,2-Trichloroethane	02/06/02	<	0.03	µg/L
42	1,1,2-Trichloroethane	08/07/02	<	0.03	µg/L
42	1,1,2-Trichloroethane	02/05/03	<	0.03	µg/L
42	1,1,2-Trichloroethane	08/06/03	<	0.03	µg/L
42	1,1,2-Trichloroethane	02/04/04	<	0.03	µg/L
42	1,1,2-Trichloroethane	08/04/04	<	0.03	µg/L
43	Trichloroethylene	02/06/02	J	0.11	µg/L
43	Trichloroethylene	08/07/02	<	0.05	µg/L
43	Trichloroethylene	02/05/03	<	0.05	µg/L
43	Trichloroethylene	08/06/03	<	0.05	µg/L
43	Trichloroethylene	02/04/04	<	0.05	µg/L
43	Trichloroethylene	08/04/04	<	0.05	µg/L
44	Vinyl chloride	02/06/02	<	0.07	µg/L
44	Vinyl chloride	08/07/02	<	0.07	µg/L
44	Vinyl chloride	02/05/03	<	0.07	µg/L
44	Vinyl chloride	08/06/03	<	0.07	µg/L
44	Vinyl chloride	02/04/04	<	0.07	µg/L
44	Vinyl chloride	08/04/04	<	0.07	µg/L
45	2-Chlorophenol	02/06/02	<	0.2	µg/L
45	2-Chlorophenol	08/07/02	<	0.2	µg/L
45	2-Chlorophenol	02/05/03	<	0.2	µg/L
45	2-Chlorophenol	08/06/03	<	0.19	µg/L
45	2-Chlorophenol	02/04/04	<	0.19	µg/L
45	2-Chlorophenol	08/04/04	<	0.19	µg/L
46	2,4-Dichlorophenol	02/06/02	<	0.3	µg/L
46	2,4-Dichlorophenol	08/07/02	<	0.3	µg/L
46	2,4-Dichlorophenol	02/05/03	<	0.3	µg/L
46	2,4-Dichlorophenol	08/06/03	<	0.29	µg/L
46	2,4-Dichlorophenol	02/04/04	<	0.29	µg/L
46	2,4-Dichlorophenol	08/04/04	<	0.29	µg/L
47	2,4-Dimethylphenol	02/06/02	<	0.2	µg/L
47	2,4-Dimethylphenol	08/07/02	<	0.2	µg/L
47	2,4-Dimethylphenol	02/05/03	<	0.2	µg/L
47	2,4-Dimethylphenol	08/06/03	<	0.19	µg/L
47	2,4-Dimethylphenol	02/04/04	<	0.19	µg/L
47	2,4-Dimethylphenol	08/04/04	<	0.19	µg/L
48	2-Methyl-4,6-Dinitrophenol	02/06/02	<	1	µg/L
48	2-Methyl-4,6-Dinitrophenol	08/07/02	<	1	µg/L
48	2-Methyl-4,6-Dinitrophenol	02/05/03	<	1	µg/L
48	2-Methyl-4,6-Dinitrophenol	08/06/03	<	0.96	µg/L
48	2-Methyl-4,6-Dinitrophenol	02/04/04	<	0.95	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
48	2-Methyl-4,6-Dinitrophenol	08/04/04	<	0.97	µg/L
49	2,4-Dinitrophenol	02/06/02	<	1	µg/L
49	2,4-Dinitrophenol	08/07/02	<	1	µg/L
49	2,4-Dinitrophenol	02/05/03	<	1	µg/L
49	2,4-Dinitrophenol	08/06/03	<	0.96	µg/L
49	2,4-Dinitrophenol	02/04/04	<	0.95	µg/L
49	2,4-Dinitrophenol	08/04/04	<	0.97	µg/L
50	2-Nitrophenol	02/06/02	<	0.1	µg/L
50	2-Nitrophenol	08/07/02	<	0.1	µg/L
50	2-Nitrophenol	02/05/03	<	0.1	µg/L
50	2-Nitrophenol	08/06/03	<	0.096	µg/L
50	2-Nitrophenol	02/04/04	<	0.095	µg/L
50	2-Nitrophenol	08/04/04	<	0.097	µg/L
51	4-Nitrophenol	02/06/02	<	2	µg/L
51	4-Nitrophenol	08/07/02	<	2	µg/L
51	4-Nitrophenol	02/05/03	<	2	µg/L
51	4-Nitrophenol	08/06/03	<	1.9	µg/L
51	4-Nitrophenol	02/04/04	<	1.9	µg/L
51	4-Nitrophenol	08/04/04	<	1.9	µg/L
52	3-Methyl-4-Chlorophenol	02/06/02	<	0.2	µg/L
52	3-Methyl-4-Chlorophenol	08/07/02	<	0.2	µg/L
52	3-Methyl-4-Chlorophenol	02/05/03	<	0.2	µg/L
52	3-Methyl-4-Chlorophenol	08/06/03	<	0.19	µg/L
52	3-Methyl-4-Chlorophenol	02/04/04	<	0.19	µg/L
52	3-Methyl-4-Chlorophenol	08/04/04	<	0.19	µg/L
53	Pentachlorophenol	02/06/02	<	2	µg/L
53	Pentachlorophenol	08/07/02	<	2	µg/L
53	Pentachlorophenol	02/05/03	<	2	µg/L
53	Pentachlorophenol	08/06/03	<	1.9	µg/L
53	Pentachlorophenol	02/04/04	<	1.9	µg/L
53	Pentachlorophenol	08/04/04	<	1.9	µg/L
54	Phenol	02/06/02	<	0.2	µg/L
54	Phenol	08/07/02	<	0.2	µg/L
54	Phenol	02/05/03	J	0.48	µg/L
54	Phenol	08/06/03	<	0.19	µg/L
54	Phenol	02/04/04	<	0.19	µg/L
54	Phenol	08/04/04	<	0.19	µg/L
55	2,4,6-Trichlorophenol	02/06/02	J	0.1	µg/L
55	2,4,6-Trichlorophenol	08/07/02	<	0.1	µg/L
55	2,4,6-Trichlorophenol	02/05/03	<	0.1	µg/L
55	2,4,6-Trichlorophenol	08/06/03	<	0.096	µg/L
55	2,4,6-Trichlorophenol	02/04/04	<	0.095	µg/L
55	2,4,6-Trichlorophenol	08/04/04	<	0.097	µg/L
56	Acenaphthene	02/06/02	<	0.046	µg/L
56	Acenaphthene	08/07/02	<	0.046	µg/L
56	Acenaphthene	02/05/03	<	0.046	µg/L
56	Acenaphthene	08/06/03	<	0.046	µg/L
56	Acenaphthene	02/04/04	<	0.046	µg/L
56	Acenaphthene	08/04/04	<	0.046	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
57	Acenaphthylene	02/06/02	<	0.062	µg/L
57	Acenaphthylene	08/07/02	<	0.062	µg/L
57	Acenaphthylene	02/05/03	<	0.062	µg/L
57	Acenaphthylene	08/06/03	<	0.062	µg/L
57	Acenaphthylene	02/04/04	<	0.062	µg/L
57	Acenaphthylene	08/04/04	<	0.062	µg/L
58	Anthracene	02/06/02	<	0.0034	µg/L
58	Anthracene	08/07/02	<	0.0034	µg/L
58	Anthracene	02/05/03	<	0.0034	µg/L
58	Anthracene	08/06/03	<	0.0034	µg/L
58	Anthracene	02/04/04	<	0.0034	µg/L
58	Anthracene	08/04/04	<	0.0034	µg/L
59	Benzidine	02/06/02	<	5	µg/L
59	Benzidine	08/07/02	<	5	µg/L
59	Benzidine	02/05/03	<	5	µg/L
59	Benzidine	08/06/03	<	4.8	µg/L
59	Benzidine	02/04/04	<	4.8	µg/L
59	Benzidine	08/04/04	<	4.8	µg/L
60	Benzo(a)anthracene	02/06/02	<	0.0058	µg/L
60	Benzo(a)anthracene	08/07/02	<	0.0058	µg/L
60	Benzo(a)anthracene	02/05/03	<	0.0058	µg/L
60	Benzo(a)anthracene	08/06/03	<	0.0058	µg/L
60	Benzo(a)anthracene	02/04/04	<	0.0058	µg/L
60	Benzo(a)anthracene	08/04/04	<	0.0058	µg/L
61	Benzo(a)pyrene	02/06/02	<	0.0079	µg/L
61	Benzo(a)pyrene	08/07/02	<	0.0079	µg/L
61	Benzo(a)pyrene	02/05/03	<	0.0079	µg/L
61	Benzo(a)pyrene	08/06/03	<	0.0079	µg/L
61	Benzo(a)pyrene	02/04/04	<	0.0079	µg/L
61	Benzo(a)pyrene	08/04/04	<	0.0079	µg/L
62	Benzo(b)fluoranthene	02/06/02	<	0.0079	µg/L
62	Benzo(b)fluoranthene	08/07/02	<	0.0079	µg/L
62	Benzo(b)fluoranthene	02/05/03	<	0.0079	µg/L
62	Benzo(b)fluoranthene	08/06/03	<	0.0079	µg/L
62	Benzo(b)fluoranthene	02/04/04	<	0.0079	µg/L
62	Benzo(b)fluoranthene	08/04/04	<	0.0079	µg/L
63	Benzo(ghi)perylene	02/06/02	<	0.012	µg/L
63	Benzo(ghi)perylene	08/07/02	<	0.012	µg/L
63	Benzo(ghi)perylene	02/05/03	<	0.012	µg/L
63	Benzo(ghi)perylene	08/06/03	<	0.012	µg/L
63	Benzo(ghi)perylene	02/04/04	<	0.012	µg/L
63	Benzo(ghi)perylene	08/04/04	<	0.012	µg/L
64	Benzo(k)fluoranthene	02/06/02	<	0.041	µg/L
64	Benzo(k)fluoranthene	08/07/02	<	0.041	µg/L
64	Benzo(k)fluoranthene	02/05/03	<	0.041	µg/L
64	Benzo(k)fluoranthene	08/06/03	<	0.041	µg/L
64	Benzo(k)fluoranthene	02/04/04	<	0.041	µg/L
64	Benzo(k)fluoranthene	08/04/04	<	0.041	µg/L
65	Bis(2-Chloroethoxy)Methane	02/06/02	<	0.1	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date	Result		Units
65	Bis(2-Chloroethoxy)Methane	08/07/02	<	0.1	µg/L
65	Bis(2-Chloroethoxy)Methane	02/05/03	<	0.1	µg/L
65	Bis(2-Chloroethoxy)Methane	08/06/03	<	0.096	µg/L
65	Bis(2-Chloroethoxy)Methane	02/04/04	<	0.095	µg/L
65	Bis(2-Chloroethoxy)Methane	08/04/04	<	0.097	µg/L
66	Bis(2-Chloroethyl)Ether	02/06/02	<	0.2	µg/L
66	Bis(2-Chloroethyl)Ether	08/07/02	<	0.2	µg/L
66	Bis(2-Chloroethyl)Ether	02/05/03	<	0.2	µg/L
66	Bis(2-Chloroethyl)Ether	08/06/03	<	0.19	µg/L
66	Bis(2-Chloroethyl)Ether	02/04/04	<	0.19	µg/L
66	Bis(2-Chloroethyl)Ether	08/04/04	<	0.19	µg/L
67	Bis(2-Chloroisopropyl)Ether	02/06/02	<	0.1	µg/L
67	Bis(2-Chloroisopropyl)Ether	08/07/02	<	0.1	µg/L
67	Bis(2-Chloroisopropyl)Ether	02/05/03	<	0.1	µg/L
67	Bis(2-Chloroisopropyl)Ether	08/06/03	<	0.096	µg/L
67	Bis(2-Chloroisopropyl)Ether	02/04/04	<	0.095	µg/L
67	Bis(2-Chloroisopropyl)Ether	08/04/04	<	0.097	µg/L
68	Bis(2-ethylhexyl)phthalate	02/06/02	J	1.8	µg/L
68	Bis(2-ethylhexyl)phthalate	08/07/02	=	1	µg/L
68	Bis(2-ethylhexyl)phthalate	02/05/03	=	1	µg/L
68	Bis(2-ethylhexyl)phthalate	08/06/03	J	0.83	µg/L
68	Bis(2-ethylhexyl)phthalate	02/04/04	J	1	µg/L
68	Bis(2-ethylhexyl)phthalate	08/04/04	J	0.79	µg/L
69	4-Bromophenyl phenyl ether	02/06/02	<	0.1	µg/L
69	4-Bromophenyl phenyl ether	08/07/02	<	0.1	µg/L
69	4-Bromophenyl phenyl ether	02/05/03	<	0.1	µg/L
69	4-Bromophenyl phenyl ether	08/06/03	<	0.096	µg/L
69	4-Bromophenyl phenyl ether	02/04/04	<	0.095	µg/L
69	4-Bromophenyl phenyl ether	08/04/04	<	0.097	µg/L
70	Butylbenzyl phthalate	02/06/02	<	0.1	µg/L
70	Butylbenzyl phthalate	08/07/02	<	0.1	µg/L
70	Butylbenzyl phthalate	02/05/03	J	0.88	µg/L
70	Butylbenzyl phthalate	08/06/03	J	0.27	µg/L
70	Butylbenzyl phthalate	02/04/04	J	0.14	µg/L
70	Butylbenzyl phthalate	08/04/04	J	0.75	µg/L
71	2-Chloronaphthalene	02/06/02	<	0.2	µg/L
71	2-Chloronaphthalene	08/07/02	<	0.2	µg/L
71	2-Chloronaphthalene	02/05/03	<	0.2	µg/L
71	2-Chloronaphthalene	08/06/03	<	0.19	µg/L
71	2-Chloronaphthalene	02/04/04	<	0.19	µg/L
71	2-Chloronaphthalene	08/04/04	<	0.19	µg/L
72	4-Chlorophenyl phenyl ether	02/06/02	<	0.2	µg/L
72	4-Chlorophenyl phenyl ether	08/07/02	<	0.2	µg/L
72	4-Chlorophenyl phenyl ether	02/05/03	<	0.2	µg/L
72	4-Chlorophenyl phenyl ether	08/06/03	<	0.19	µg/L
72	4-Chlorophenyl phenyl ether	02/04/04	<	0.19	µg/L
72	4-Chlorophenyl phenyl ether	08/04/04	<	0.19	µg/L
73	Chrysene	02/06/02	J	0.005	µg/L
73	Chrysene	08/07/02	J	0.008	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
73	Chrysene	02/05/03	<	0.0036	µg/L
73	Chrysene	08/06/03	J	0.007	µg/L
73	Chrysene	02/04/04	J	0.007	µg/L
73	Chrysene	08/04/04	J	0.007	µg/L
74	Dibenzo(a,h)anthracene	02/06/02	<	0.0054	µg/L
74	Dibenzo(a,h)anthracene	08/07/02	<	0.0054	µg/L
74	Dibenzo(a,h)anthracene	02/05/03	<	0.0054	µg/L
74	Dibenzo(a,h)anthracene	08/06/03	<	0.0054	µg/L
74	Dibenzo(a,h)anthracene	02/04/04	<	0.0054	µg/L
74	Dibenzo(a,h)anthracene	08/04/04	<	0.0054	µg/L
75	1,2-Dichlorobenzene	02/06/02	<	0.05	µg/L
75	1,2-Dichlorobenzene	08/07/02	<	0.05	µg/L
75	1,2-Dichlorobenzene	02/05/03	<	0.05	µg/L
75	1,2-Dichlorobenzene	08/06/03	<	0.05	µg/L
75	1,2-Dichlorobenzene	02/04/04	<	0.05	µg/L
75	1,2-Dichlorobenzene	08/04/04	<	0.05	µg/L
76	1,3-Dichlorobenzene	02/06/02	<	0.06	µg/L
76	1,3-Dichlorobenzene	08/07/02	<	0.06	µg/L
76	1,3-Dichlorobenzene	02/05/03	<	0.06	µg/L
76	1,3-Dichlorobenzene	08/06/03	<	0.06	µg/L
76	1,3-Dichlorobenzene	02/04/04	<	0.06	µg/L
76	1,3-Dichlorobenzene	08/04/04	<	0.05	µg/L
77	1,4-Dichlorobenzene	02/06/02	J	0.67	µg/L
77	1,4-Dichlorobenzene	08/07/02	J	0.95	µg/L
77	1,4-Dichlorobenzene	02/05/03	J	0.53	µg/L
77	1,4-Dichlorobenzene	08/06/03	J	0.82	µg/L
77	1,4-Dichlorobenzene	02/04/04	J	0.79	µg/L
77	1,4-Dichlorobenzene	08/04/04	J	0.65	µg/L
78	3,3-Dichlorobenzidine	02/06/02	<	0.1	µg/L
78	3,3-Dichlorobenzidine	08/07/02	<	0.1	µg/L
78	3,3-Dichlorobenzidine	02/05/03	<	0.1	µg/L
78	3,3-Dichlorobenzidine	08/06/03	<	0.096	µg/L
78	3,3-Dichlorobenzidine	02/04/04	<	0.095	µg/L
78	3,3-Dichlorobenzidine	08/04/04	<	0.097	µg/L
79	Diethyl phthalate	02/06/02	=	9.8	µg/L
79	Diethyl phthalate	08/07/02	<	0.05	µg/L
79	Diethyl phthalate	02/05/03	J	0.29	µg/L
79	Diethyl phthalate	08/06/03	<	0.048	µg/L
79	Diethyl phthalate	02/04/04	J	0.054	µg/L
79	Diethyl phthalate	08/04/04	J	0.16	µg/L
80	Dimethyl phthalate	02/06/02	<	0.1	µg/L
80	Dimethyl phthalate	08/07/02	<	0.1	µg/L
80	Dimethyl phthalate	02/05/03	<	0.1	µg/L
80	Dimethyl phthalate	08/06/03	<	0.096	µg/L
80	Dimethyl phthalate	02/04/04	<	0.095	µg/L
80	Dimethyl phthalate	08/04/04	<	0.097	µg/L
81	Di-n-butyl phthalate	02/06/02	<	0.25	µg/L
81	Di-n-butyl phthalate	08/07/02	J	0.32	µg/L
81	Di-n-butyl phthalate	02/05/03	J	0.56	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
81	Di-n-butyl phthalate	08/06/03	J	0.5	µg/L
81	Di-n-butyl phthalate	02/04/04	J	0.97	µg/L
81	Di-n-butyl phthalate	08/04/04	J	1.3	µg/L
82	2,4-Dinitrotoluene	02/06/02	<	0.1	µg/L
82	2,4-Dinitrotoluene	08/07/02	<	0.1	µg/L
82	2,4-Dinitrotoluene	02/05/03	<	0.1	µg/L
82	2,4-Dinitrotoluene	08/06/03	<	0.096	µg/L
82	2,4-Dinitrotoluene	02/04/04	<	0.095	µg/L
82	2,4-Dinitrotoluene	08/04/04	<	0.097	µg/L
83	2,6-Dinitrotoluene	02/06/02	<	0.2	µg/L
83	2,6-Dinitrotoluene	08/07/02	<	0.2	µg/L
83	2,6-Dinitrotoluene	02/05/03	<	0.2	µg/L
83	2,6-Dinitrotoluene	08/06/03	<	0.19	µg/L
83	2,6-Dinitrotoluene	02/04/04	J	0.92	µg/L
83	2,6-Dinitrotoluene	08/04/04	<	0.19	µg/L
84	Di-n-octyl phthalate	02/06/02	<	0.1	µg/L
84	Di-n-octyl phthalate	08/07/02	<	0.1	µg/L
84	Di-n-octyl phthalate	02/05/03	<	0.1	µg/L
84	Di-n-octyl phthalate	08/06/03	<	0.096	µg/L
84	Di-n-octyl phthalate	02/04/04	<	0.095	µg/L
84	Di-n-octyl phthalate	08/04/04	<	0.097	µg/L
86	Fluoranthene	02/06/02	<	0.009	µg/L
86	Fluoranthene	08/07/02	J	0.048	µg/L
86	Fluoranthene	02/05/03	<	0.009	µg/L
86	Fluoranthene	08/06/03	J	0.02	µg/L
86	Fluoranthene	02/04/04	<	0.009	µg/L
86	Fluoranthene	08/04/04	=	0.079	µg/L
87	Fluorene	02/06/02	<	0.0073	µg/L
87	Fluorene	08/07/02	<	0.0073	µg/L
87	Fluorene	02/05/03	<	0.0073	µg/L
87	Fluorene	08/06/03	<	0.0073	µg/L
87	Fluorene	02/04/04	<	0.0073	µg/L
87	Fluorene	08/04/04	<	0.0073	µg/L
88	Hexachlorobenzene	02/06/02	<	0.0015	µg/L
88	Hexachlorobenzene	08/07/02	<	0.0015	µg/L
88	Hexachlorobenzene	02/05/03	<	0.0015	µg/L
88	Hexachlorobenzene	06/04/03	<	0.0015	µg/L
88	Hexachlorobenzene	07/02/03	<	0.0015	µg/L
88	Hexachlorobenzene	08/06/03	<	0.0015	µg/L
88	Hexachlorobenzene	09/04/03	<	0.0015	µg/L
88	Hexachlorobenzene	10/01/03	<	0.0015	µg/L
88	Hexachlorobenzene	11/05/03	<	0.0015	µg/L
88	Hexachlorobenzene	12/03/03	<	0.0015	µg/L
88	Hexachlorobenzene	01/07/04	<	0.0015	µg/L
88	Hexachlorobenzene	02/04/04	<	0.0015	µg/L
88	Hexachlorobenzene	03/03/04	<	0.0015	µg/L
88	Hexachlorobenzene	04/07/04	<	0.0015	µg/L
88	Hexachlorobenzene	05/05/04	<	0.0015	µg/L
88	Hexachlorobenzene	06/02/04	<	0.0015	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
88	Hexachlorobenzene	07/04/04	<	0.0015	µg/L
88	Hexachlorobenzene	08/04/04	<	0.0015	µg/L
88	Hexachlorobenzene	09/01/04	<	0.0015	µg/L
88	Hexachlorobenzene	10/06/04	<	0.0015	µg/L
88	Hexachlorobenzene	11/03/04	<	0.0015	µg/L
88	Hexachlorobenzene	12/01/04	<	0.0015	µg/L
89	Hexachlorobutadiene	02/06/02	<	0.4	µg/L
89	Hexachlorobutadiene	08/07/02	<	0.4	µg/L
89	Hexachlorobutadiene	02/05/03	<	0.4	µg/L
89	Hexachlorobutadiene	08/06/03	<	0.038	µg/L
89	Hexachlorobutadiene	02/04/04	<	0.038	µg/L
89	Hexachlorobutadiene	08/04/04	<	0.039	µg/L
90	Hexachlorocyclopentadiene	02/06/02	<	1	µg/L
90	Hexachlorocyclopentadiene	08/07/02	<	1	µg/L
90	Hexachlorocyclopentadiene	02/05/03	<	1	µg/L
90	Hexachlorocyclopentadiene	08/06/03	<	0.96	µg/L
90	Hexachlorocyclopentadiene	02/04/04	<	0.95	µg/L
90	Hexachlorocyclopentadiene	08/04/04	<	0.97	µg/L
91	Hexachloroethane	02/06/02	<	0.4	µg/L
91	Hexachloroethane	08/07/02	<	0.4	µg/L
91	Hexachloroethane	02/05/03	<	0.4	µg/L
91	Hexachloroethane	08/06/03	<	0.038	µg/L
91	Hexachloroethane	02/04/04	<	0.038	µg/L
91	Hexachloroethane	08/04/04	<	0.039	µg/L
92	Indeno(1,2,3-cd)pyrene	02/06/02	<	0.0045	µg/L
92	Indeno(1,2,3-cd)pyrene	08/07/02	<	0.0045	µg/L
92	Indeno(1,2,3-cd)pyrene	02/05/03	<	0.0045	µg/L
92	Indeno(1,2,3-cd)pyrene	08/06/03	<	0.0045	µg/L
92	Indeno(1,2,3-cd)pyrene	02/04/04	<	0.0045	µg/L
92	Indeno(1,2,3-cd)pyrene	08/04/04	<	0.0045	µg/L
93	Isophorone	02/06/02	<	0.1	µg/L
93	Isophorone	08/07/02	<	0.1	µg/L
93	Isophorone	02/05/03	<	0.1	µg/L
93	Isophorone	08/06/03	<	0.096	µg/L
93	Isophorone	02/04/04	<	0.095	µg/L
93	Isophorone	08/04/04	<	0.097	µg/L
94	Naphthalene	02/06/02	<	0.037	µg/L
94	Naphthalene	08/07/02	<	0.037	µg/L
94	Naphthalene	02/05/03	<	0.037	µg/L
94	Naphthalene	08/06/03	<	0.037	µg/L
94	Naphthalene	02/04/04	<	0.037	µg/L
94	Naphthalene	08/04/04	<	0.037	µg/L
95	Nitrobenzene	02/06/02	<	0.1	µg/L
95	Nitrobenzene	08/07/02	<	0.1	µg/L
95	Nitrobenzene	02/05/03	<	0.1	µg/L
95	Nitrobenzene	08/06/03	<	0.096	µg/L
95	Nitrobenzene	02/04/04	<	0.095	µg/L
95	Nitrobenzene	08/04/04	<	0.097	µg/L
96	N-nitrosodimethylamine	02/06/02	<	0.2	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
96	N-nitrosodimethylamine	08/07/02	<	0.2	µg/L
96	N-nitrosodimethylamine	02/05/03	<	0.2	µg/L
96	N-nitrosodimethylamine	08/06/03	<	0.19	µg/L
96	N-nitrosodimethylamine	02/04/04	<	0.19	µg/L
96	N-nitrosodimethylamine	08/04/04	<	0.19	µg/L
97	N-nitrosodi-n-propylamine	02/06/02	<	0.1	µg/L
97	N-nitrosodi-n-propylamine	08/07/02	<	0.1	µg/L
97	N-nitrosodi-n-propylamine	02/05/03	<	0.1	µg/L
97	N-nitrosodi-n-propylamine	08/06/03	<	0.096	µg/L
97	N-nitrosodi-n-propylamine	02/04/04	<	0.095	µg/L
97	N-nitrosodi-n-propylamine	08/04/04	<	0.097	µg/L
98	N-nitrosodiphenylamine	02/06/02	<	0.1	µg/L
98	N-nitrosodiphenylamine	08/07/02	<	0.1	µg/L
98	N-nitrosodiphenylamine	02/05/03	<	0.1	µg/L
98	N-nitrosodiphenylamine	08/06/03	<	0.096	µg/L
98	N-nitrosodiphenylamine	02/04/04	<	0.095	µg/L
98	N-nitrosodiphenylamine	08/04/04	<	0.097	µg/L
99	Phenanthrene	02/06/02	<	0.0063	µg/L
99	Phenanthrene	08/07/02	<	0.0063	µg/L
99	Phenanthrene	02/05/03	<	0.0063	µg/L
99	Phenanthrene	08/06/03	=	0.11	µg/L
99	Phenanthrene	02/04/04	<	0.0063	µg/L
99	Phenanthrene	08/04/04	<	0.0063	µg/L
100	Pyrene	02/06/02	<	0.0027	µg/L
100	Pyrene	08/07/02	<	0.0027	µg/L
100	Pyrene	02/05/03	<	0.0027	µg/L
100	Pyrene	08/06/03	<	0.0027	µg/L
100	Pyrene	02/04/04	<	0.0027	µg/L
100	Pyrene	08/04/04	<	0.0027	µg/L
101	1,2,4-Trichlorobenzene	02/06/02	<	0.3	µg/L
101	1,2,4-Trichlorobenzene	08/07/02	<	0.3	µg/L
101	1,2,4-Trichlorobenzene	02/05/03	<	0.3	µg/L
101	1,2,4-Trichlorobenzene	08/06/03	<	0.29	µg/L
101	1,2,4-Trichlorobenzene	02/04/04	<	0.29	µg/L
101	1,2,4-Trichlorobenzene	08/04/04	<	0.29	µg/L
102	Aldrin	02/06/02	<	0.0018	µg/L
102	Aldrin	08/07/02	<	0.0018	µg/L
102	Aldrin	02/05/03	<	0.0018	µg/L
102	Aldrin	06/04/03	<	0.0018	µg/L
102	Aldrin	07/02/03	<	0.0018	µg/L
102	Aldrin	08/06/03	<	0.0018	µg/L
102	Aldrin	09/04/03	<	0.0018	µg/L
102	Aldrin	10/01/03	<	0.0018	µg/L
102	Aldrin	11/05/03	<	0.0018	µg/L
102	Aldrin	12/03/03	<	0.0018	µg/L
102	Aldrin	01/07/04	<	0.0018	µg/L
102	Aldrin	02/04/04	<	0.0018	µg/L
102	Aldrin	03/03/04	<	0.0018	µg/L
102	Aldrin	04/07/04	<	0.0018	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
102	Aldrin	05/05/04	<	0.0018	µg/L
102	Aldrin	06/02/04	<	0.0018	µg/L
102	Aldrin	07/04/04	<	0.0018	µg/L
102	Aldrin	08/04/04	<	0.0018	µg/L
102	Aldrin	09/01/04	<	0.0018	µg/L
102	Aldrin	10/06/04	<	0.0018	µg/L
102	Aldrin	11/03/04	<	0.0018	µg/L
102	Aldrin	12/01/04	<	0.0018	µg/L
103	alpha-BHC	02/06/02	<	0.00061	µg/L
103	alpha-BHC	08/07/02	<	0.00061	µg/L
103	alpha-BHC	02/05/03	<	0.00061	µg/L
103	alpha-BHC	06/04/03	<	0.00061	µg/L
103	alpha-BHC	07/02/03	<	0.00061	µg/L
103	alpha-BHC	08/06/03	<	0.00061	µg/L
103	alpha-BHC	09/04/03	<	0.00061	µg/L
103	alpha-BHC	10/01/03	<	0.00061	µg/L
103	alpha-BHC	11/05/03	<	0.00061	µg/L
103	alpha-BHC	12/03/03	<	0.00061	µg/L
103	alpha-BHC	01/07/04	<	0.00061	µg/L
103	alpha-BHC	02/04/04	<	0.00061	µg/L
103	alpha-BHC	03/03/04	<	0.00061	µg/L
103	alpha-BHC	04/07/04	<	0.00061	µg/L
103	alpha-BHC	05/05/04	<	0.00061	µg/L
103	alpha-BHC	06/02/04	<	0.00061	µg/L
103	alpha-BHC	07/04/04	<	0.00061	µg/L
103	alpha-BHC	08/04/04	<	0.00061	µg/L
103	alpha-BHC	09/01/04	<	0.00061	µg/L
103	alpha-BHC	10/06/04	<	0.00061	µg/L
103	alpha-BHC	11/03/04	<	0.00061	µg/L
103	alpha-BHC	12/01/04	<	0.00061	µg/L
104	beta-BHC	02/06/02	<	0.001	µg/L
104	beta-BHC	08/07/02	<	0.001	µg/L
104	beta-BHC	02/05/03	<	0.001	µg/L
104	beta-BHC	06/04/03	<	0.001	µg/L
104	beta-BHC	07/02/03	<	0.001	µg/L
104	beta-BHC	08/06/03	<	0.001	µg/L
104	beta-BHC	09/04/03	<	0.001	µg/L
104	beta-BHC	10/01/03	<	0.001	µg/L
104	beta-BHC	11/05/03	<	0.001	µg/L
104	beta-BHC	12/03/03	<	0.001	µg/L
104	beta-BHC	01/07/04	<	0.001	µg/L
104	beta-BHC	02/04/04	<	0.001	µg/L
104	beta-BHC	03/03/04	<	0.001	µg/L
104	beta-BHC	04/07/04	<	0.001	µg/L
104	beta-BHC	05/05/04	<	0.001	µg/L
104	beta-BHC	06/02/04	<	0.001	µg/L
104	beta-BHC	07/04/04	<	0.001	µg/L
104	beta-BHC	08/04/04	<	0.001	µg/L
104	beta-BHC	09/01/04	<	0.001	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
104	beta-BHC	10/06/04	<	0.001	µg/L
104	beta-BHC	11/03/04	<	0.001	µg/L
104	beta-BHC	12/01/04	<	0.001	µg/L
105	gamma-BHC	02/06/02	<	0.0012	µg/L
105	gamma-BHC	08/07/02	J	0.0072	µg/L
105	gamma-BHC	02/05/03	<	0.0012	µg/L
105	gamma-BHC	06/04/03	<	0.0012	µg/L
105	gamma-BHC	07/02/03	<	0.0012	µg/L
105	gamma-BHC	08/06/03	J	0.0083	µg/L
105	gamma-BHC	09/04/03	<	0.0012	µg/L
105	gamma-BHC	10/01/03	<	0.0012	µg/L
105	gamma-BHC	11/05/03	<	0.0012	µg/L
105	gamma-BHC	12/03/03	<	0.0012	µg/L
105	gamma-BHC	01/07/04	<	0.0012	µg/L
105	gamma-BHC	02/04/04	<	0.0012	µg/L
105	gamma-BHC	03/03/04	<	0.0012	µg/L
105	gamma-BHC	04/07/04	<	0.0012	µg/L
105	gamma-BHC	05/05/04	<	0.0012	µg/L
105	gamma-BHC	06/02/04	<	0.0012	µg/L
105	gamma-BHC	07/04/04	<	0.0012	µg/L
105	gamma-BHC	08/04/04	<	0.0012	µg/L
105	gamma-BHC	09/01/04	<	0.0012	µg/L
105	gamma-BHC	10/06/04	<	0.0012	µg/L
105	gamma-BHC	11/03/04	<	0.0012	µg/L
105	gamma-BHC	12/01/04	<	0.0012	µg/L
106	delta-BHC	02/06/02	<	0.00064	µg/L
106	delta-BHC	08/07/02	<	0.00064	µg/L
106	delta-BHC	02/05/03	<	0.00064	µg/L
106	delta-BHC	06/04/03	<	0.00064	µg/L
106	delta-BHC	07/02/03	<	0.00064	µg/L
106	delta-BHC	08/06/03	<	0.00064	µg/L
106	delta-BHC	09/04/03	<	0.00064	µg/L
106	delta-BHC	10/01/03	<	0.00064	µg/L
106	delta-BHC	11/05/03	<	0.00064	µg/L
106	delta-BHC	12/03/03	<	0.00064	µg/L
106	delta-BHC	01/07/04	<	0.00064	µg/L
106	delta-BHC	02/04/04	<	0.00064	µg/L
106	delta-BHC	03/03/04	<	0.00064	µg/L
106	delta-BHC	04/07/04	<	0.00064	µg/L
106	delta-BHC	05/05/04	<	0.00064	µg/L
106	delta-BHC	06/02/04	<	0.00064	µg/L
106	delta-BHC	07/04/04	<	0.00064	µg/L
106	delta-BHC	08/04/04	<	0.00064	µg/L
106	delta-BHC	09/01/04	<	0.00064	µg/L
106	delta-BHC	10/06/04	<	0.00064	µg/L
106	delta-BHC	11/03/04	<	0.00064	µg/L
106	delta-BHC	12/01/04	<	0.00064	µg/L
107	Chlordane	02/06/02	<	0.014	µg/L
107	Chlordane	08/07/02	<	0.014	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date	Result		Units
107	Chlordane	02/05/03	<	0.014	µg/L
107	Chlordane	06/04/03	<	0.014	µg/L
107	Chlordane	07/02/03	<	0.014	µg/L
107	Chlordane	08/06/03	<	0.014	µg/L
107	Chlordane	09/04/03	<	0.014	µg/L
107	Chlordane	10/01/03	<	0.014	µg/L
107	Chlordane	11/05/03	<	0.014	µg/L
107	Chlordane	12/03/03	<	0.014	µg/L
107	Chlordane	01/07/04	<	0.014	µg/L
107	Chlordane	02/04/04	<	0.014	µg/L
107	Chlordane	03/03/04	<	0.014	µg/L
107	Chlordane	04/07/04	<	0.014	µg/L
107	Chlordane	05/05/04	<	0.014	µg/L
107	Chlordane	06/02/04	<	0.014	µg/L
107	Chlordane	07/04/04	<	0.014	µg/L
107	Chlordane	08/04/04	<	0.014	µg/L
107	Chlordane	09/01/04	<	0.014	µg/L
107	Chlordane	10/06/04	<	0.014	µg/L
107	Chlordane	11/03/04	<	0.014	µg/L
107	Chlordane	12/01/04	<	0.014	µg/L
108	4,4'-DDT	02/06/02	<	0.0013	µg/L
108	4,4'-DDT	08/07/02	<	0.0013	µg/L
108	4,4'-DDT	02/05/03	<	0.0013	µg/L
108	4,4'-DDT	06/04/03	<	0.0013	µg/L
108	4,4'-DDT	07/02/03	<	0.0013	µg/L
108	4,4'-DDT	08/06/03	<	0.0013	µg/L
108	4,4'-DDT	09/04/03	<	0.0013	µg/L
108	4,4'-DDT	10/01/03	<	0.0013	µg/L
108	4,4'-DDT	11/05/03	<	0.0013	µg/L
108	4,4'-DDT	12/03/03	<	0.0013	µg/L
108	4,4'-DDT	01/07/04	<	0.0013	µg/L
108	4,4'-DDT	02/04/04	<	0.0013	µg/L
108	4,4'-DDT	03/03/04	<	0.0013	µg/L
108	4,4'-DDT	04/07/04	<	0.0013	µg/L
108	4,4'-DDT	05/05/04	<	0.0013	µg/L
108	4,4'-DDT	06/02/04	<	0.0013	µg/L
108	4,4'-DDT	07/04/04	<	0.0013	µg/L
108	4,4'-DDT	08/04/04	<	0.0013	µg/L
108	4,4'-DDT	09/01/04	<	0.0013	µg/L
108	4,4'-DDT	10/06/04	<	0.0013	µg/L
108	4,4'-DDT	11/03/04	<	0.0013	µg/L
108	4,4'-DDT	12/01/04	<	0.0013	µg/L
109	4,4'-DDE	02/06/02	<	0.00097	µg/L
109	4,4'-DDE	08/07/02	<	0.00097	µg/L
109	4,4'-DDE	02/05/03	<	0.00097	µg/L
109	4,4'-DDE	06/04/03	<	0.00097	µg/L
109	4,4'-DDE	07/02/03	<	0.00097	µg/L
109	4,4'-DDE	08/06/03	<	0.00097	µg/L
109	4,4'-DDE	09/04/03	<	0.00097	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
109	4,4'-DDE	10/01/03	<	0.00097	µg/L
109	4,4'-DDE	11/05/03	<	0.00097	µg/L
109	4,4'-DDE	12/03/03	<	0.00097	µg/L
109	4,4'-DDE	01/07/04	<	0.00097	µg/L
109	4,4'-DDE	02/04/04	<	0.00097	µg/L
109	4,4'-DDE	03/03/04	<	0.00097	µg/L
109	4,4'-DDE	04/07/04	<	0.00097	µg/L
109	4,4'-DDE	05/05/04	<	0.00097	µg/L
109	4,4'-DDE	06/02/04	<	0.00097	µg/L
109	4,4'-DDE	07/04/04	<	0.00097	µg/L
109	4,4'-DDE	08/04/04	<	0.00097	µg/L
109	4,4'-DDE	09/01/04	<	0.00097	µg/L
109	4,4'-DDE	10/06/04	<	0.00097	µg/L
109	4,4'-DDE	11/03/04	<	0.00097	µg/L
109	4,4'-DDE	12/01/04	<	0.00097	µg/L
110	4,4'-DDD	02/06/02	J	0.0008	µg/L
110	4,4'-DDD	08/07/02	<	0.00077	µg/L
110	4,4'-DDD	02/05/03	<	0.00077	µg/L
110	4,4'-DDD	06/04/03	<	0.00077	µg/L
110	4,4'-DDD	07/02/03	<	0.00077	µg/L
110	4,4'-DDD	08/06/03	<	0.00077	µg/L
110	4,4'-DDD	09/04/03	<	0.00077	µg/L
110	4,4'-DDD	10/01/03	<	0.00077	µg/L
110	4,4'-DDD	11/05/03	<	0.00077	µg/L
110	4,4'-DDD	12/03/03	<	0.00077	µg/L
110	4,4'-DDD	01/07/04	<	0.00077	µg/L
110	4,4'-DDD	02/04/04	<	0.00077	µg/L
110	4,4'-DDD	03/03/04	<	0.00077	µg/L
110	4,4'-DDD	04/07/04	<	0.00077	µg/L
110	4,4'-DDD	05/05/04	<	0.00077	µg/L
110	4,4'-DDD	06/02/04	<	0.00077	µg/L
110	4,4'-DDD	07/04/04	<	0.00077	µg/L
110	4,4'-DDD	08/04/04	<	0.00077	µg/L
110	4,4'-DDD	09/01/04	<	0.00077	µg/L
110	4,4'-DDD	10/06/04	<	0.00077	µg/L
110	4,4'-DDD	11/03/04	<	0.00077	µg/L
110	4,4'-DDD	12/01/04	<	0.00077	µg/L
111	Dieldrin	02/06/02	<	0.00077	µg/L
111	Dieldrin	08/07/02	<	0.00077	µg/L
111	Dieldrin	02/05/03	<	0.00077	µg/L
111	Dieldrin	06/04/03	<	0.00077	µg/L
111	Dieldrin	07/02/03	<	0.00077	µg/L
111	Dieldrin	08/06/03	<	0.00077	µg/L
111	Dieldrin	09/04/03	<	0.00077	µg/L
111	Dieldrin	10/01/03	<	0.00077	µg/L
111	Dieldrin	11/05/03	<	0.00077	µg/L
111	Dieldrin	12/03/03	<	0.00077	µg/L
111	Dieldrin	01/07/04	<	0.00077	µg/L
111	Dieldrin	02/04/04	<	0.00077	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
111	Dieldrin	03/03/04	<	0.00077	µg/L
111	Dieldrin	04/07/04	<	0.00077	µg/L
111	Dieldrin	05/05/04	<	0.00077	µg/L
111	Dieldrin	06/02/04	<	0.00077	µg/L
111	Dieldrin	07/04/04	<	0.00077	µg/L
111	Dieldrin	08/04/04	<	0.00077	µg/L
111	Dieldrin	09/01/04	<	0.00077	µg/L
111	Dieldrin	10/06/04	<	0.00077	µg/L
111	Dieldrin	11/03/04	<	0.00077	µg/L
111	Dieldrin	12/01/04	<	0.00077	µg/L
112	alpha-Endosulfan	02/06/02	<	0.00067	µg/L
112	alpha-Endosulfan	08/07/02	<	0.00067	µg/L
112	alpha-Endosulfan	02/05/03	<	0.00067	µg/L
112	alpha-Endosulfan	06/04/03	<	0.00067	µg/L
112	alpha-Endosulfan	07/02/03	<	0.00067	µg/L
112	alpha-Endosulfan	08/06/03	<	0.00067	µg/L
112	alpha-Endosulfan	09/04/03	<	0.00067	µg/L
112	alpha-Endosulfan	10/01/03	<	0.00067	µg/L
112	alpha-Endosulfan	11/05/03	<	0.00067	µg/L
112	alpha-Endosulfan	12/03/03	<	0.00067	µg/L
112	alpha-Endosulfan	01/07/04	<	0.00067	µg/L
112	alpha-Endosulfan	02/04/04	<	0.00067	µg/L
112	alpha-Endosulfan	03/03/04	<	0.00067	µg/L
112	alpha-Endosulfan	04/07/04	<	0.00067	µg/L
112	alpha-Endosulfan	05/05/04	<	0.00067	µg/L
112	alpha-Endosulfan	06/02/04	<	0.00067	µg/L
112	alpha-Endosulfan	07/04/04	<	0.00067	µg/L
112	alpha-Endosulfan	08/04/04	<	0.00067	µg/L
112	alpha-Endosulfan	09/01/04	<	0.00067	µg/L
112	alpha-Endosulfan	10/06/04	<	0.00067	µg/L
112	alpha-Endosulfan	11/03/04	<	0.00067	µg/L
112	alpha-Endosulfan	12/01/04	<	0.00067	µg/L
113	beta-Endosulfan	02/06/02	J	0.0006	µg/L
113	beta-Endosulfan	08/07/02	<	0.00055	µg/L
113	beta-Endosulfan	06/04/03	<	0.00055	µg/L
113	beta-Endosulfan	07/02/03	<	0.00055	µg/L
113	beta-Endosulfan	08/06/03	<	0.00055	µg/L
113	beta-Endosulfan	09/04/03	<	0.00055	µg/L
113	beta-Endosulfan	10/01/03	<	0.00055	µg/L
113	beta-Endosulfan	11/05/03	<	0.00055	µg/L
113	beta-Endosulfan	12/03/03	<	0.00055	µg/L
113	beta-Endosulfan	01/07/04	<	0.00055	µg/L
113	beta-Endosulfan	02/04/04	<	0.00055	µg/L
113	beta-Endosulfan	03/03/04	<	0.00055	µg/L
113	beta-Endosulfan	04/07/04	<	0.00055	µg/L
113	beta-Endosulfan	05/05/04	<	0.00055	µg/L
113	beta-Endosulfan	06/02/04	<	0.00055	µg/L
113	beta-Endosulfan	07/04/04	<	0.00055	µg/L
113	beta-Endosulfan	08/04/04	<	0.00055	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
113	beta-Endosulfan	09/01/04	<	0.00055	µg/L
113	beta-Endosulfan	10/06/04	<	0.00055	µg/L
113	beta-Endosulfan	11/03/04	<	0.00055	µg/L
113	beta-Endosulfan	12/01/04	<	0.00055	µg/L
114	Endosulfan sulfate	02/06/02	J	0.0015	µg/L
114	Endosulfan sulfate	08/07/02	<	0.00078	µg/L
114	Endosulfan sulfate	02/05/03	J	0.0056	µg/L
114	Endosulfan sulfate	06/04/03	<	0.00078	µg/L
114	Endosulfan sulfate	07/02/03	<	0.00078	µg/L
114	Endosulfan sulfate	08/06/03	<	0.00078	µg/L
114	Endosulfan sulfate	09/04/03	<	0.00078	µg/L
114	Endosulfan sulfate	10/01/03	<	0.00078	µg/L
114	Endosulfan sulfate	11/05/03	<	0.00078	µg/L
114	Endosulfan sulfate	12/03/03	<	0.00078	µg/L
114	Endosulfan sulfate	01/07/04	<	0.00078	µg/L
114	Endosulfan sulfate	02/04/04	<	0.00078	µg/L
114	Endosulfan sulfate	03/03/04	<	0.00078	µg/L
114	Endosulfan sulfate	04/07/04	<	0.00078	µg/L
114	Endosulfan sulfate	05/05/04	<	0.00078	µg/L
114	Endosulfan sulfate	06/02/04	<	0.00078	µg/L
114	Endosulfan sulfate	07/04/04	<	0.00078	µg/L
114	Endosulfan sulfate	08/04/04	<	0.00078	µg/L
114	Endosulfan sulfate	09/01/04	<	0.00078	µg/L
114	Endosulfan sulfate	10/06/04	<	0.00078	µg/L
114	Endosulfan sulfate	11/03/04	<	0.00078	µg/L
114	Endosulfan sulfate	12/01/04	<	0.00078	µg/L
115	Endrin	02/06/02	<	0.00063	µg/L
115	Endrin	08/07/02	<	0.00063	µg/L
115	Endrin	02/05/03	<	0.00063	µg/L
115	Endrin	06/04/03	<	0.00063	µg/L
115	Endrin	07/02/03	<	0.00063	µg/L
115	Endrin	08/06/03	<	0.00063	µg/L
115	Endrin	09/04/03	<	0.00063	µg/L
115	Endrin	10/01/03	<	0.00063	µg/L
115	Endrin	11/05/03	<	0.00063	µg/L
115	Endrin	12/03/03	<	0.00063	µg/L
115	Endrin	01/07/04	<	0.00063	µg/L
115	Endrin	02/04/04	<	0.00063	µg/L
115	Endrin	03/03/04	<	0.00063	µg/L
115	Endrin	04/07/04	<	0.00063	µg/L
115	Endrin	05/05/04	<	0.00063	µg/L
115	Endrin	06/02/04	<	0.00063	µg/L
115	Endrin	07/04/04	<	0.00063	µg/L
115	Endrin	08/04/04	<	0.00063	µg/L
115	Endrin	09/01/04	<	0.00063	µg/L
115	Endrin	10/06/04	<	0.00063	µg/L
115	Endrin	11/03/04	<	0.00063	µg/L
115	Endrin	12/01/04	<	0.00063	µg/L
116	Endrin aldehyde	02/06/02	<	0.00042	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
116	Endrin aldehyde	08/07/02	<	0.00042	µg/L
116	Endrin aldehyde	02/05/03	<	0.00042	µg/L
116	Endrin aldehyde	06/04/03	<	0.00042	µg/L
116	Endrin aldehyde	07/02/03	<	0.00042	µg/L
116	Endrin aldehyde	08/06/03	<	0.00042	µg/L
116	Endrin aldehyde	09/04/03	<	0.00042	µg/L
116	Endrin aldehyde	10/01/03	<	0.00042	µg/L
116	Endrin aldehyde	11/05/03	<	0.00042	µg/L
116	Endrin aldehyde	12/03/03	<	0.00042	µg/L
116	Endrin aldehyde	01/07/04	<	0.00042	µg/L
116	Endrin aldehyde	02/04/04	<	0.00042	µg/L
116	Endrin aldehyde	03/03/04	<	0.00042	µg/L
116	Endrin aldehyde	04/07/04	<	0.00042	µg/L
116	Endrin aldehyde	05/05/04	<	0.00042	µg/L
116	Endrin aldehyde	06/02/04	<	0.00042	µg/L
116	Endrin aldehyde	07/04/04	<	0.00042	µg/L
116	Endrin aldehyde	08/04/04	<	0.00042	µg/L
116	Endrin aldehyde	09/01/04	<	0.00042	µg/L
116	Endrin aldehyde	10/06/04	<	0.00042	µg/L
116	Endrin aldehyde	11/03/04	<	0.00042	µg/L
116	Endrin aldehyde	12/01/04	<	0.00042	µg/L
117	Heptachlor	02/06/02	J	0.002	µg/L
117	Heptachlor	08/07/02	<	0.00084	µg/L
117	Heptachlor	02/05/03	<	0.00084	µg/L
117	Heptachlor	06/04/03	<	0.00084	µg/L
117	Heptachlor	07/02/03	<	0.00084	µg/L
117	Heptachlor	08/06/03	<	0.00084	µg/L
117	Heptachlor	09/04/03	<	0.00084	µg/L
117	Heptachlor	10/01/03	<	0.00084	µg/L
117	Heptachlor	11/05/03	<	0.00084	µg/L
117	Heptachlor	12/03/03	<	0.00084	µg/L
117	Heptachlor	01/07/04	<	0.00084	µg/L
117	Heptachlor	02/04/04	<	0.00084	µg/L
117	Heptachlor	03/03/04	<	0.00084	µg/L
117	Heptachlor	04/07/04	<	0.00084	µg/L
117	Heptachlor	05/05/04	<	0.00084	µg/L
117	Heptachlor	06/02/04	<	0.00084	µg/L
117	Heptachlor	07/04/04	<	0.00084	µg/L
117	Heptachlor	08/04/04	<	0.00084	µg/L
117	Heptachlor	09/01/04	<	0.00084	µg/L
117	Heptachlor	10/06/04	<	0.00084	µg/L
117	Heptachlor	11/03/04	<	0.00084	µg/L
117	Heptachlor	12/01/04	<	0.00084	µg/L
118	Heptachlor epoxide	02/06/02	<	0.0012	µg/L
118	Heptachlor epoxide	08/07/02	<	0.0012	µg/L
118	Heptachlor epoxide	02/05/03	<	0.0012	µg/L
118	Heptachlor epoxide	06/04/03	<	0.0012	µg/L
118	Heptachlor epoxide	07/02/03	<	0.0012	µg/L
118	Heptachlor epoxide	08/06/03	<	0.0012	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
118	Heptachlor epoxide	09/04/03	<	0.0012	µg/L
118	Heptachlor epoxide	10/01/03	<	0.0012	µg/L
118	Heptachlor epoxide	11/05/03	<	0.0012	µg/L
118	Heptachlor epoxide	12/03/03	<	0.0012	µg/L
118	Heptachlor epoxide	01/07/04	<	0.0012	µg/L
118	Heptachlor epoxide	02/04/04	<	0.0012	µg/L
118	Heptachlor epoxide	03/03/04	<	0.0012	µg/L
118	Heptachlor epoxide	04/07/04	<	0.0012	µg/L
118	Heptachlor epoxide	05/05/04	<	0.0012	µg/L
118	Heptachlor epoxide	06/02/04	<	0.0012	µg/L
118	Heptachlor epoxide	07/04/04	<	0.0012	µg/L
118	Heptachlor epoxide	08/04/04	<	0.0012	µg/L
118	Heptachlor epoxide	09/01/04	<	0.0012	µg/L
118	Heptachlor epoxide	10/06/04	<	0.0012	µg/L
118	Heptachlor epoxide	11/03/04	<	0.0012	µg/L
118	Heptachlor epoxide	12/01/04	<	0.0012	µg/L
119	PCB 1016	02/06/02	<	0.02	µg/L
119	PCB 1016	08/07/02	<	0.02	µg/L
119	PCB 1016	02/05/03	<	0.02	µg/L
119	PCB 1016	06/04/03	<	0.02	µg/L
119	PCB 1016	07/02/03	<	0.02	µg/L
119	PCB 1016	08/06/03	<	0.02	µg/L
119	PCB 1016	09/04/03	<	0.02	µg/L
119	PCB 1016	10/01/03	<	0.02	µg/L
119	PCB 1016	11/05/03	<	0.02	µg/L
119	PCB 1016	12/03/03	<	0.02	µg/L
119	PCB 1016	01/07/04	<	0.02	µg/L
119	PCB 1016	02/04/04	<	0.02	µg/L
119	PCB 1016	03/03/04	<	0.02	µg/L
119	PCB 1016	04/07/04	<	0.02	µg/L
119	PCB 1016	05/05/04	<	0.02	µg/L
119	PCB 1016	06/02/04	<	0.02	µg/L
119	PCB 1016	07/04/04	<	0.02	µg/L
119	PCB 1016	08/04/04	<	0.02	µg/L
119	PCB 1016	09/01/04	<	0.02	µg/L
119	PCB 1016	10/06/04	<	0.02	µg/L
119	PCB 1016	11/03/04	<	0.02	µg/L
119	PCB 1016	12/01/04	<	0.02	µg/L
120	PCB 1221	02/06/02	<	0.14	µg/L
120	PCB 1221	08/07/02	<	0.14	µg/L
120	PCB 1221	02/05/03	<	0.14	µg/L
120	PCB 1221	06/04/03	<	0.14	µg/L
120	PCB 1221	07/02/03	<	0.14	µg/L
120	PCB 1221	08/06/03	<	0.14	µg/L
120	PCB 1221	09/04/03	<	0.14	µg/L
120	PCB 1221	10/01/03	<	0.14	µg/L
120	PCB 1221	11/05/03	<	0.14	µg/L
120	PCB 1221	12/03/03	<	0.14	µg/L
120	PCB 1221	01/07/04	<	0.14	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
120	PCB 1221	02/04/04	<	0.14	µg/L
120	PCB 1221	03/03/04	<	0.14	µg/L
120	PCB 1221	04/07/04	<	0.14	µg/L
120	PCB 1221	05/05/04	<	0.14	µg/L
120	PCB 1221	06/02/04	<	0.14	µg/L
120	PCB 1221	07/04/04	<	0.14	µg/L
120	PCB 1221	08/04/04	<	0.14	µg/L
120	PCB 1221	09/01/04	<	0.14	µg/L
120	PCB 1221	10/06/04	<	0.14	µg/L
120	PCB 1221	11/03/04	<	0.14	µg/L
120	PCB 1221	12/01/04	<	0.14	µg/L
121	PCB 1232	02/06/02	<	0.06	µg/L
121	PCB 1232	08/07/02	<	0.06	µg/L
121	PCB 1232	02/05/03	<	0.06	µg/L
121	PCB 1232	06/04/03	<	0.06	µg/L
121	PCB 1232	07/02/03	<	0.06	µg/L
121	PCB 1232	08/06/03	<	0.06	µg/L
121	PCB 1232	09/04/03	<	0.06	µg/L
121	PCB 1232	10/01/03	<	0.06	µg/L
121	PCB 1232	11/05/03	<	0.06	µg/L
121	PCB 1232	12/03/03	<	0.06	µg/L
121	PCB 1232	01/07/04	<	0.06	µg/L
121	PCB 1232	02/04/04	<	0.06	µg/L
121	PCB 1232	03/03/04	<	0.06	µg/L
121	PCB 1232	04/07/04	<	0.06	µg/L
121	PCB 1232	05/05/04	<	0.06	µg/L
121	PCB 1232	06/02/04	<	0.06	µg/L
121	PCB 1232	07/04/04	<	0.06	µg/L
121	PCB 1232	08/04/04	<	0.06	µg/L
121	PCB 1232	09/01/04	<	0.06	µg/L
121	PCB 1232	10/06/04	<	0.06	µg/L
121	PCB 1232	11/03/04	<	0.06	µg/L
121	PCB 1232	12/01/04	<	0.06	µg/L
122	PCB 1242	02/06/02	<	0.02	µg/L
122	PCB 1242	08/07/02	<	0.02	µg/L
122	PCB 1242	02/05/03	<	0.02	µg/L
122	PCB 1242	06/04/03	<	0.02	µg/L
122	PCB 1242	07/02/03	<	0.02	µg/L
122	PCB 1242	08/06/03	<	0.02	µg/L
122	PCB 1242	09/04/03	<	0.02	µg/L
122	PCB 1242	10/01/03	<	0.02	µg/L
122	PCB 1242	11/05/03	<	0.02	µg/L
122	PCB 1242	12/03/03	<	0.02	µg/L
122	PCB 1242	01/07/04	<	0.02	µg/L
122	PCB 1242	02/04/04	<	0.02	µg/L
122	PCB 1242	03/03/04	<	0.02	µg/L
122	PCB 1242	04/07/04	<	0.02	µg/L
122	PCB 1242	05/05/04	<	0.02	µg/L
122	PCB 1242	06/02/04	<	0.02	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
122	PCB 1242	07/04/04	<	0.02	µg/L
122	PCB 1242	08/04/04	<	0.02	µg/L
122	PCB 1242	09/01/04	<	0.02	µg/L
122	PCB 1242	10/06/04	<	0.02	µg/L
122	PCB 1242	11/03/04	<	0.02	µg/L
122	PCB 1242	12/01/04	<	0.02	µg/L
123	PCB 1248	02/06/02	<	0.1	µg/L
123	PCB 1248	08/07/02	<	0.1	µg/L
123	PCB 1248	02/05/03	<	0.1	µg/L
123	PCB 1248	06/04/03	<	0.1	µg/L
123	PCB 1248	07/02/03	<	0.1	µg/L
123	PCB 1248	08/06/03	<	0.1	µg/L
123	PCB 1248	09/04/03	<	0.1	µg/L
123	PCB 1248	10/01/03	<	0.1	µg/L
123	PCB 1248	11/05/03	<	0.1	µg/L
123	PCB 1248	12/03/03	<	0.1	µg/L
123	PCB 1248	01/07/04	<	0.1	µg/L
123	PCB 1248	02/04/04	<	0.1	µg/L
123	PCB 1248	03/03/04	<	0.1	µg/L
123	PCB 1248	04/07/04	<	0.1	µg/L
123	PCB 1248	05/05/04	<	0.1	µg/L
123	PCB 1248	06/02/04	<	0.1	µg/L
123	PCB 1248	07/04/04	<	0.1	µg/L
123	PCB 1248	08/04/04	<	0.1	µg/L
123	PCB 1248	09/01/04	<	0.1	µg/L
123	PCB 1248	10/06/04	<	0.1	µg/L
123	PCB 1248	11/03/04	<	0.1	µg/L
123	PCB 1248	12/01/04	<	0.1	µg/L
124	PCB 1254	02/06/02	<	0.08	µg/L
124	PCB 1254	08/07/02	<	0.08	µg/L
124	PCB 1254	02/05/03	<	0.08	µg/L
124	PCB 1254	06/04/03	<	0.08	µg/L
124	PCB 1254	07/02/03	<	0.08	µg/L
124	PCB 1254	08/06/03	<	0.08	µg/L
124	PCB 1254	09/04/03	<	0.08	µg/L
124	PCB 1254	10/01/03	<	0.08	µg/L
124	PCB 1254	11/05/03	<	0.08	µg/L
124	PCB 1254	12/03/03	<	0.08	µg/L
124	PCB 1254	01/07/04	<	0.08	µg/L
124	PCB 1254	02/04/04	<	0.08	µg/L
124	PCB 1254	03/03/04	<	0.08	µg/L
124	PCB 1254	04/07/04	<	0.08	µg/L
124	PCB 1254	05/05/04	<	0.08	µg/L
124	PCB 1254	06/02/04	<	0.08	µg/L
124	PCB 1254	07/04/04	<	0.08	µg/L
124	PCB 1254	08/04/04	<	0.08	µg/L
124	PCB 1254	09/01/04	<	0.08	µg/L
124	PCB 1254	10/06/04	<	0.08	µg/L
124	PCB 1254	11/03/04	<	0.08	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
124	PCB 1254	12/01/04	<	0.08	µg/L
125	PCB 1260	02/06/02	<	0.09	µg/L
125	PCB 1260	08/07/02	<	0.09	µg/L
125	PCB 1260	02/05/03	<	0.09	µg/L
125	PCB 1260	06/04/03	<	0.09	µg/L
125	PCB 1260	07/02/03	<	0.09	µg/L
125	PCB 1260	08/06/03	<	0.09	µg/L
125	PCB 1260	09/04/03	<	0.09	µg/L
125	PCB 1260	10/01/03	<	0.09	µg/L
125	PCB 1260	11/05/03	<	0.09	µg/L
125	PCB 1260	12/03/03	<	0.09	µg/L
125	PCB 1260	01/07/04	<	0.09	µg/L
125	PCB 1260	02/04/04	<	0.09	µg/L
125	PCB 1260	03/03/04	<	0.09	µg/L
125	PCB 1260	04/07/04	<	0.09	µg/L
125	PCB 1260	05/05/04	<	0.09	µg/L
125	PCB 1260	06/02/04	<	0.09	µg/L
125	PCB 1260	07/04/04	<	0.09	µg/L
125	PCB 1260	08/04/04	<	0.09	µg/L
125	PCB 1260	09/01/04	<	0.09	µg/L
125	PCB 1260	10/06/04	<	0.09	µg/L
125	PCB 1260	11/03/04	<	0.09	µg/L
125	PCB 1260	12/01/04	<	0.09	µg/L
126	Toxaphene	02/06/02	<	0.072	µg/L
126	Toxaphene	08/07/02	<	0.072	µg/L
126	Toxaphene	02/05/03	<	0.072	µg/L
126	Toxaphene	06/04/03	<	0.072	µg/L
126	Toxaphene	07/02/03	<	0.072	µg/L
126	Toxaphene	08/06/03	<	0.072	µg/L
126	Toxaphene	09/04/03	<	0.072	µg/L
126	Toxaphene	10/01/03	<	0.072	µg/L
126	Toxaphene	11/05/03	<	0.072	µg/L
126	Toxaphene	12/03/03	<	0.072	µg/L
126	Toxaphene	01/07/04	<	0.072	µg/L
126	Toxaphene	02/04/04	<	0.072	µg/L
126	Toxaphene	03/03/04	<	0.072	µg/L
126	Toxaphene	04/07/04	<	0.072	µg/L
126	Toxaphene	05/05/04	<	0.072	µg/L
126	Toxaphene	06/02/04	<	0.072	µg/L
126	Toxaphene	07/04/04	<	0.072	µg/L
126	Toxaphene	08/04/04	<	0.072	µg/L
126	Toxaphene	09/01/04	<	0.072	µg/L
126	Toxaphene	10/06/04	<	0.072	µg/L
126	Toxaphene	11/03/04	<	0.072	µg/L
126	Toxaphene	12/01/04	<	0.072	µg/L
	Tributyltin	02/06/02	=	0.0072	µg/L
	Tributyltin	08/07/02	=	0.0060	µg/L
	Tributyltin	02/05/03	=	0.0071	µg/L
	Tributyltin	08/06/03	<	0.0046	µg/L

Appendix F-1 Livermore (EBDA Common Outfall) Effluent Data 2002-2004 Used in Reasonable Potential Analysis

CTR #	Constituent	Date		Result	Units
	Tributyltin	02/04/04	<	0.0046	µg/L
	Tributyltin	08/04/04	<	0.0046	µg/L

Qualifiers

= actual value

< Not Detected, method detection limit is listed

J estimated value as defined by the SIP

Fact Sheet Appendix F-2 **City of Livermore** **Reasonable Potential Analysis Results**

Beginning		Step 1	Step 2	Step 3					Step 4	Step 5					Step 6	Steps 7 & 8	Final Result	
PTP # (CTR)	Constituent	C (ug/L) Lowest Applicable Criteria/ Objective[a]	Effluent Data Available (Y/N)?	Are all data points non-detects (Y/N)?	If all data points ND, enter the minimum detection limit (MDL) (ug/L)	Enter the detected maximum effluent concentration (MEC) (ug/L)	If all data points are ND and MDL>C, interim monitoring is required.	MEC (ug/L) MEC=detected maximum value; if all ND & MDL<C, MEC=MDL	MEC vs. C 1. If MEC>=C, effluent limitation is required; 2. If MEC<C, go to Step 5.	B Data Available (Y/N)?	Are all data points non-detects (Y/N)?	If all data points ND, enter the MDL (ug/L)	Enter the detected maximum effluent concentration (B) (ug/L)	If all B is ND, is MDL>C?	B vs. C If B>C and data detected in effluent, effluent limitation is required.		RPA Result	Reason
1	Antimony	4300	Y	Y	4		All ND, MDL<C, MEC=MDL	4	MEC<C, go to Step 5	Y	N		1.8		B<C, go to Step 7		No	MEC<C, B<C
2	Arsenic[b]	36	Y	N		1.8		1.8	MEC<C, go to Step 5	Y	N		2.46		B<C, go to Step 7		No	MEC<C, B<C
3	Beryllium	No Criteria	Y	N		0.075	No Criteria	0.075	No Criteria	Y	N		0.215	N	No Criteria	No Criteria	No	No Criteria
4	Cadmium[b]	9.4	Y	N		1.3		1.3	MEC<C, go to Step 5	Y	N		0.1268		B<C, go to Step 7		No	MEC<C, B<C
5a	Chromium (III)	No Criteria	Y	N		2.57		2.57	MEC<C, go to Step 5	Y	N		4.4		B<C, go to Step 7		No	MEC<C, B<C
5b	Chromium (VI)[b]	50.4	Y	N		2.57		2.57	MEC<C, go to Step 5	Y	N		4.4		B<C, go to Step 7		No	MEC<C, B<C
6	Copper[b]	10.1	Y	N		18.4		18.4	MEC>=C, Effluent Limits Required	Y	N		2.549		B<C, go to Step 7		Yes	MEC>=C
7	Lead[b]	8.5	Y	N		6.2		6.2	MEC<C, go to Step 5	Y	N		0.804		B<C, go to Step 7		No	MEC<C, B<C
8	Mercury[b]	0.025	Y	N		0.049		0.049	MEC>=C, Effluent Limits Required	Y	N		0.0086		B<C, go to Step 7		Yes	MEC>=C
9	Nickel[b]	13	Y	N		18.7		18.7	MEC>=C, Effluent Limits Required	Y	N		3.73		B<C, go to Step 7		Yes	MEC>=C
10	Selenium[b]	5	Y	N		1.84		1.84	MEC<C, go to Step 5	Y	N		0.39		B<C, go to Step 7		No	MEC<C, B<C
11	Silver[b]	2.2	Y	N		1.4		1.4	MEC<C, go to Step 5	Y	N		0.0516		B<C, go to Step 7		No	MEC<C, B<C
12	Thallium	6.3	Y	N		0.31		0.31	MEC<C, go to Step 5	Y	N		0.21		B<C, go to Step 7		No	MEC<C, B<C
13	Zinc[b]	196	Y	N		205		205	MEC>=C, Effluent Limits Required	Y	N		5.1		B<C, go to Step 7		Yes	MEC>=C
14	Cyanide[b]		Y	N		6.2		6.2	MEC>=C, Effluent Limits Required	Y	Y	0.4		N	All B ND, go to Step 7		Yes	MEC>=C
15	Asbestos	No Criteria	N				No Criteria		No Criteria	N					No Criteria	No Criteria	No	No Criteria
16	2,3,7,8 TCDD or Dioxin	0.0000000014	Y	Y	9.50E-06		All ND, MDL>C, go to Step 5			N					No ambient data, go to Step 7	Eff & Amb monitoring	Undetermined	UD; Effluent MDL>C, No B data
	Dioxin TEQ	0.0000000014	Y	Y	9.50E-06	0	All ND, MDL>C, go to Step 5			N			7.10E-08		No ambient data, go to Step 7	Eff & Amb monitoring	Undetermined	UD; Effluent MDL>C, No B data
17	Acrolein	780	Y	Y	5		All ND, MDL<C, MEC=MDL	5	MEC<C, go to Step 5	Y	Y	0.5		N	All B ND, go to Step 7		No	MEC<C, B<C
18	Acrylonitrile	0.66	Y	Y	1		All ND, MDL>C, go to Step 5			Y	N		0.03		B<C, go to Step 7	Effluent monitoring	Undetermined	UD; Effluent MDL>C, B<C
19	Benzene	71	Y	Y	0.05		All ND, MDL<C, MEC=MDL	0.05	MEC<C, go to Step 5	Y	Y	0.05		N	All B ND, go to Step 7		No	MEC<C, B<C
20	Bromoform	360	Y	Y	0.1		All ND, MDL<C, MEC=MDL	0.1	MEC<C, go to Step 5	Y	Y	0.5		N	All B ND, go to Step 7		No	MEC<C, B<C
21	Carbon Tetrachloride	4.4	Y	Y	0.14		All ND, MDL<C, MEC=MDL	0.14	MEC<C, go to Step 5	Y	N		0.06		B<C, go to Step 7		No	MEC<C, B<C
22	Chlorobenzene	21000	Y	Y	0.05		All ND, MDL<C, MEC=MDL	0.05	MEC<C, go to Step 5	Y	Y	0.5		N	All B ND, go to Step 7		No	MEC<C, B<C
23	Chlorodibromomethane	34	Y	N		0.22		0.22	MEC<C, go to Step 5	Y	Y	0.05		N	All B ND, go to Step 7		No	MEC<C, B<C
24	Chloroethane	No Criteria	Y	Y	0.19		No Criteria	0.19	No Criteria	Y	Y	0.5		N	No Criteria	No Criteria	No	No Criteria
25	2-Chloroethylvinyl ether	No Criteria	Y	Y	0.1		No Criteria	0.1	No Criteria	Y	Y	0.5		N	No Criteria	No Criteria	No	No Criteria
26	Chloroform	No Criteria	Y	N		2.6	No Criteria	2.6	No Criteria	Y	Y	0.5		N	No Criteria	No Criteria	No	No Criteria
27	Dichlorobromomethane	46	Y	N		0.26		0.26	MEC<C, go to Step 5	Y	Y	0.05		N	All B ND, go to Step 7		No	MEC<C, B<C
28	1,1-Dichloroethane	No Criteria	Y	Y	0.07		No Criteria	0.07	No Criteria	Y	Y	0.05		N	No Criteria	No Criteria	No	No Criteria
29	1,2-Dichloroethane	99	Y	Y	0.06		All ND, MDL<C, MEC=MDL	0.06	MEC<C, go to Step 5	Y	N		0.04		B<C, go to Step 7		No	MEC<C, B<C
30	1,1-Dichloroethylene	3.2	Y	Y	0.05		All ND, MDL<C, MEC=MDL	0.05	MEC<C, go to Step 5	Y	Y	0.5		N	All B ND, go to Step 7		No	MEC<C, B<C
31	1,2-Dichloropropane	39	Y	Y	0.12		All ND, MDL<C, MEC=MDL	0.12	MEC<C, go to Step 5	Y	Y	0.05		N	All B ND, go to Step 7		No	MEC<C, B<C
32	1,3-Dichloropropylene	1700	Y	Y	0.07		All ND, MDL<C, MEC=MDL	0.07	MEC<C, go to Step 5	N					No ambient data, go to Step 7	Ambient monitoring	No	MEC<C, No B data
33	Ethylbenzene	29000	Y	Y	0.08		All ND, MDL<C, MEC=MDL	0.08	MEC<C, go to Step 5	Y	Y	0.5		N	All B ND, go to Step 7		No	MEC<C, B<C
34	Methyl Bromide	4000	Y	Y	0.21		All ND, MDL<C, MEC=MDL	0.21	MEC<C, go to Step 5	Y	Y	0.5		N	All B ND, go to Step 7		No	MEC<C, B<C
35	Methyl Chloride	No Criteria	Y	N		0.63	No Criteria	0.63	No Criteria	Y	Y	0.5		N	No Criteria	No Criteria	No	No Criteria
36	Methylene Chloride	1600	Y	N		1.2		1.2	MEC<C, go to Step 5	Y	N		0.5		B<C, go to Step 7		No	MEC<C, B<C
37	1,1,2,2-Tetrachloroethane	11	Y	Y	0.11		All ND, MDL<C, MEC=MDL	0.11	MEC<C, go to Step 5	Y	Y	0.05		N	All B ND, go to Step 7		No	MEC<C, B<C
38	Tetrachloroethylene	8.85	Y	Y	0.11		All ND, MDL<C, MEC=MDL	0.11	MEC<C, go to Step 5	Y	Y	0.05		N	All B ND, go to Step 7		No	MEC<C, B<C
39	Toluene	200000	Y	N		1.6		1.6	MEC<C, go to Step 5	Y	Y	0.3		N	All B ND, go to Step 7		No	MEC<C, B<C
40	1,2-Trans-Dichloroethylene	140000	Y	Y	0.14		All ND, MDL<C, MEC=MDL	0.14	MEC<C, go to Step 5	Y	Y	0.5		N	All B ND, go to Step 7		No	MEC<C, B<C
41	1,1,1-Trichloroethane	No Criteria	Y	Y	0.08		No Criteria	0.08	No Criteria	Y	Y	0.5		N	No Criteria	No Criteria	No	No Criteria
42	1,1,2-Trichloroethane	42	Y	Y	0.03		All ND, MDL<C, MEC=MDL	0.03	MEC<C, go to Step 5	Y	Y	0.05		N	All B ND, go to Step 7		No	MEC<C, B<C
43	Trichloroethylene	81	Y	N		0.15		0.15	MEC<C, go to Step 5	Y	Y	0.5		N	All B ND, go to Step 7		No	MEC<C, B<C
44	Vinyl Chloride	525	Y	Y	0.07		All ND, MDL<C, MEC=MDL	0.07	MEC<C, go to Step 5	Y	Y	0.5		N	All B ND, go to Step 7		No	MEC<C, B<C
45	2-Chlorophenol	400	Y	Y	0.19		All ND, MDL<C, MEC=MDL	0.19	MEC<C, go to Step 5	Y	Y	1.2		N	All B ND, go to Step 7		No	MEC<C, B<C
46	2,4-Dichlorophenol	790	Y	Y	0.29		All ND, MDL<C, MEC=MDL	0.29	MEC<C, go to Step 5	Y	Y	1.3		N	All B ND, go to Step 7		No	MEC<C, B<C
47	2,4-Dimethylphenol	2300	Y	Y	0.19		All ND, MDL<C, MEC=MDL	0.19	MEC<C, go to Step 5	Y	Y	1.3		N	All B ND, go to Step 7		No	MEC<C, B<C
48	2-Methyl- 4,6-Dinitrophenol	765	Y	Y	0.95		All ND, MDL<C, MEC=MDL	0.95	MEC<C, go to Step 5	Y	Y	1.2		N	All B ND, go to Step 7		No	MEC<C, B<C
49	2,4-Dinitrophenol	14000	Y	Y	0.95		All ND, MDL<C, MEC=MDL	0.95	MEC<C, go to Step 5	Y	Y	0.7		N	All B ND, go to Step 7		No	MEC<C, B<C
50	2-Nitrophenol	No Criteria	Y	Y	0.095		No Criteria	0.095	No Criteria	Y	Y	1.3		N	No Criteria	No Criteria	No	No Criteria
51	4-Nitrophenol	No Criteria	Y	Y	1.9		No Criteria	1.9	No Criteria	Y	Y	1.6		N	No Criteria	No Criteria	No	No Criteria
52	3-Methyl 4-Chlorophenol	No Criteria	Y	Y	0.19		No Criteria	0.19	No Criteria	Y	Y	1.1		N	No Criteria	No Criteria	No	No Criteria
53	Pentachlorophenol	7.9	Y	Y	1.9		All ND, MDL<C, MEC=MDL	1.9	MEC<C, go to Step 5	Y	Y	1		N	All B ND, go to Step 7		No	MEC<C, B<C
54	Phenol	4600000	Y	N		0.48		0.48	MEC<C, go to Step 5	Y	Y	1.3		N	All B ND, go to Step 7		No	MEC<C, B<C
55	2,4,6-Trichlorophenol	6.5	Y	N		0.1		0.1	MEC<C, go to Step 5	Y	Y	1.3		N	All B ND, go to Step 7		No	MEC<C, B<C
56	Acenaphthene	2700	Y	Y	0.046		All ND, MDL<C, MEC=MDL	0.046	MEC<C, go to Step 5	Y	N		0.0015		B<C, go to Step 7		No	MEC<C, B<C
57	Acenaphthylene	No Criteria	Y	Y	0.062		No Criteria	0.062	No Criteria	Y	N		0.00053		No Criteria	No Criteria	No	No Criteria
58	Anthracene	110000	Y	Y	0.0034		All ND, MDL<C, MEC=MDL	0.0034	MEC<C, go to Step 5	Y	N		0.0005		B<C, go to Step 7		No	MEC<C, B<C
59	Benzidine	0.00054	Y	Y	4.8		All ND, MDL>C, go to Step 5			Y	Y	0.0015		N	All B ND, go to Step 7	Effluent monitoring	Undetermined	UD; Effluent MDL>C, B<C
60	Benzo(a)Anthracene	0.049	Y	N		0.007		0.007	MEC<C, go to Step 5	Y	N		0.0053		B<C, go to Step 7		No	MEC<C, B<C
61	Benzo(a)Pyrene	0.049	Y	Y	0.0079		All ND, MDL<C, MEC=MDL	0.0079	MEC<C, go to Step 5	Y	N		0.00029		B<C, go to Step 7		No	MEC<C, B<C
62	Benzo(b)Fluoranthene	0.049	Y	N		0.008		0.008	MEC<C, go to Step 5	Y	N		0.0046		B<C, go to Step 7		No	MEC<C, B<C
63	Benzo(ghi)Perylene	No Criteria	Y	N		0.035	No Criteria	0.035	No Criteria	Y	N		0.0027		No Criteria	No Criteria	No	No Criteria
64	Benzo(k)Fluoranthene	0.049	Y	Y	0.041		All ND, MDL<C, MEC=MDL	0.041	MEC<C, go to Step 5	Y	N		0.0015		B<C, go to Step 7		No	MEC<C, B<C
65	Bis(2-Chloroethoxy)Methane	No Criteria	Y	Y	0.095		No Criteria	0.095	No Criteria	Y	Y	0.3		N	No Criteria	No Criteria	No	No Criteria
66	Bis(2-Chloroethyl)Ether	1.4	Y	Y	0.19		All ND, MDL<C, MEC=MDL	0.19	MEC<C, go to Step 5	Y	Y	0.3		N	All B ND, go to Step 7		No	MEC<C, B<C
67	Bis(2-Chloroisopropyl)Ether	170000	Y	Y	0.095		All ND, MDL<C, MEC=MDL	0.095	MEC<C, go to Step 5	N					No ambient data, go to Step 7	Ambient monitoring	No	MEC<C, No B data
68	Bis(2-Ethylhexyl)Phthalate	5.9	Y	N		2.4		2.4	MEC<C, go to Step 5	Y	Y	0.5		N	All B ND, go to Step 7		No	MEC<C, B<C
69	4-Bromophenyl Phenyl Ether	No Criteria	Y	Y	0.095		No Criteria	0.095	No Criteria	Y	Y	0.23		N	No Criteria	No Criteria	No	No Criteria
70	Butylbenzyl Phthalate	5200	Y	N		0.88		0.88	MEC<C, go to Step 5	Y	Y	0.52		N	All B ND, go to Step 7		No	MEC<C, B<C
71	2-Chloronaphthalene	4300	Y	Y	0.19		All ND, MDL<C, MEC=MDL	0.19	MEC<C, go to Step 5	Y	Y	0.3		N	All B ND, go to Step 7		No	MEC<C, B<C
72	4-Chlorophenyl Phenyl Ether	No Criteria	Y	Y	0.19		No Criteria	0.19	No Criteria	Y	Y	0.3		N	No Criteria	No Criteria	No	No Criteria
73	Chrysene	0.049	Y	N		0.034		0.034	MEC<C, go to Step 5	Y	N		0.0024		B<C, go to Step 7		No	MEC<C, B<C
74	Dibenzo(a,h)Anthracene	0.049	Y	Y	0.0054		All ND, MDL<C, MEC=MDL	0.0054	MEC<C, go to Step 5	Y	N		0.00064		B<C, go to Step 7		No	MEC<C, B<C
75	1,2-Dichlorobenzene	17000	Y	Y	0.05		All ND, MDL<C, MEC=MDL	0.05	MEC<C, go to Step 5	Y	Y	0.8		N	All B ND, go to Step 7		No	MEC<C, B<C
76	1,3-Dichlorobenzene	2600	Y	Y	0.05		All ND, MDL<C, MEC=MDL	0.05	MEC<C, go to Step 5	Y	Y	0.8		N	All B ND, go to Step 7		No	MEC<C, B<C
77	1,4-Dichlorobenzene	2600	Y	N		1.2		1.2	MEC<C, go to Step 5	Y	Y	0.8		N	All B ND, go to Step 7		No	MEC<C, B<C
78	3,3 Dichlorobenzidine	0.077	Y	Y	0.095		All ND, MDL>C, go to Step 5			Y	Y	0.001		N	All B ND, go to Step 7	Effluent monitoring	Undetermined	UD; Effluent MDL>C, B<C
79	Diethyl Phthalate	120000	Y	N		9.8		9.8	MEC<C, go to Step 5	Y	Y	0.24		N	All B ND, go to Step 7		No	MEC<C, B<C
80	Dimethyl Phthalate	2900000	Y	Y	0.095		All ND, MDL<C, MEC=MDL	0.095	MEC<C, go to Step 5	Y	Y	0.24		N	All B ND, go to Step 7		No	MEC<C, B<C
81	Di-n-Butyl Phthalate	12000	Y	N		1.3		1.3	MEC<C, go to Step 5	Y	Y	0.5		N	All B ND, go to Step 7		No	MEC<C, B<C
82	2,4-Dinitrotoluene	9.1	Y	Y	0.095		All ND, MDL<C, MEC=MDL	0.095	MEC<C, go to Step 5	Y	Y	0.27		N	All B ND, go to Step 7		No	MEC<C, B<C
83	2,6-Dinitrotoluene	No Criteria	Y	N		0.92	No Criteria	0.92	No Criteria	Y	Y	0.29		N	No Criteria	No Criteria	No	No Criteria
84	Di-n-Octyl Phthalate	No Criteria	Y	Y	0.095		No Criteria	0.095	No Criteria	Y	Y	0.38		N	No Criteria	No Criteria	No	No Criteria
85	1,2-Diphenylhydrazine	0.54	N						No effluent data, go to Step 5	Y	N		0.0037		B<C, go to Step 7	Effluent monitoring	Undetermined	UD; Effluent MDL>C, B<C
86	Fluoranthene	370	Y	N		0.079		0.079	MEC<C, go to Step 5	Y	N		0.011		B<C, go to Step 7		No	MEC<C, B<C
87	Fluorene	14000	Y	Y	0.0073		All ND, MDL<C, MEC=MDL	0.0073	MEC<C, go to Step 5	Y	N		0.00208		B<C, go to Step 7		No	MEC<C, B<C
88	Hexachlorobenzene	0.00077	Y	Y	0.0015		All ND, MDL>C, go to Step 5			Y	N		0.0000202		B<C, go to Step 7	Effluent monitoring	Undetermined	UD; Effluent MDL>C, B<C
89	Hexachlorobutadiene	50	Y	Y	0.038		All ND, MDL<C, MEC=MDL	0.038	MEC<C, go to Step 5	Y	Y	0.3		N	All B ND, go to Step 7		No	MEC<C, B<C
90	Hexachlorocyclopentadiene	17000	Y	Y	0.95		All ND, MDL<C, MEC=MDL	0.95	MEC<C, go to Step 5	Y	Y	0.31		N	All B ND, go to Step 7		No	MEC<C, B<C
91	Hexachloroethane	8.9	Y	Y	0.038		All ND, MDL<C, MEC=MDL	0.038	MEC<C, go to Step 5	Y	Y	0.2		N	All B ND, go to Step 7		No	MEC<C, B<C
92	Indeno(1,2,3-cd)Pyrene	0.049	Y	Y	0.0045		All ND, MDL<C, MEC=MDL	0.0045	MEC<C, go to Step 5	Y	N		0.004		B<C, go to Step 7		No	MEC<C, B<C
93	Isophorone	600	Y	Y	0.095		All ND, MDL<C, MEC=MDL	0.095	MEC<C, go to Step 5	Y	Y	0.3		N	All B ND, go to Step 7		No	MEC<C, B<C
94	Naphthalene	No Criteria	Y	Y	0.037		No Criteria	0.037	No Criteria	Y	N		0.0023		No Criteria	No Criteria	No	No Criteria
95	Nitrobenzene	1900	Y	Y	0.095		All ND, MDL<C, MEC=MDL	0.095	MEC<C, go to Step 5	Y	Y	0.25		N	All B ND, go to Step 7		No	MEC<C, B<C
96	N-Nitrosodimethylamine	8.1	Y	Y	0.19		All ND, MDL<C, MEC=MDL	0.19	MEC<C, go to Step 5	Y	Y	0.3		N	All B ND, go to Step 7		No	MEC<C, B<C
97	N-Nitrosodi-n-Propylamine	1.4	Y	Y	0.095		All ND, MDL<C, MEC=MDL	0.095	MEC<C, go to Step 5	Y	Y	0.001		N	All B ND, go to Step 7		No	MEC<C, B<C

Fact Sheet Appendix F-2 **City of Livermore** **Reasonable Potential Analysis Results**

Beginning		Step 1	Step 2	Step 3					Step 4	Step 5				Step 6	Steps 7 & 8	Final Result	
		C (ug/L)						MEC (ug/L)	MEC vs. C	B vs. C				B vs. C			
PTP # (CTR)	Constituent	Lowest Applicable Criteria/ Objective*	Effluent Data Available (Y/N)?	Are all data points non-detects (Y/N)?	If all data points ND, enter the minimum detection limit (MDL) (ug/L)	Enter the detected maximum effluent concentration (MEC) (ug/L)	If all data points are ND and MDL>C, interim monitoring is required.	MEC=detected maximum value; if all ND & MDL<C, MEC=MDL	1. If MEC=>C, effluent limitation is required; 2. If MEC<C, go to Step 5	B Data Available (Y/N)?	Are all data points non-detects (Y/N)?	If all data points ND, enter the MDL (ug/L)	Enter the detected maximum effluent concentration (B) (ug/L)	If all B is ND, is MDL>C?	If B>C and data detected in effluent, effluent limitation is required.	7) Review other information in the SIP page 4. If information is unavailable or insufficient, the RWQCB shall establish interim monitoring requirements.	RPA Result	Reason
98	N-Nitrosodiphenylamine	16	Y	Y	0.095		All ND, MDL<C, MEC=MDL	0.095	MEC<C, go to Step 5	Y	Y	0.001		N	All B ND, go to Step 7		No	MEC<C, B<C
99	Phenanthrene	No Criteria	Y	N		0.13	No Criteria	0.13	No Criteria	Y	N		0.0061		No Criteria	No Criteria	No	No Criteria
100	Pyrene	11000	Y	Y	0.0027		All ND, MDL<C, MEC=MDL	0.0027	MEC<C, go to Step 5	Y	N		0.0051		B<C, go to Step 7		No	MEC<C, B<C
101	1,2,4-Trichlorobenzene	No Criteria	Y	Y	0.29		No Criteria	0.29	No Criteria	Y	Y	0.3		N	No Criteria	No Criteria	No	No Criteria
102	Aldrin	0.00014	Y	Y	0.0018		All ND, MDL>C, go to Step 5			N					No ambient data, go to Step 7	Eff & Amb monitoring	Undetermined	UD; Effluent MDL>C, B<C
103	alpha-BHC	0.013	Y	Y	0.00061		All ND, MDL<C, MEC=MDL	0.00061	MEC<C, go to Step 5	Y	N		0.000496		B<C, go to Step 7		No	MEC<C, B<C
104	beta-BHC	0.046	Y	Y	0.001		All ND, MDL<C, MEC=MDL	0.001	MEC<C, go to Step 5	Y	N		0.000413		B<C, go to Step 7		No	MEC<C, B<C
105	gamma-BHC	0.063	Y	N		0.0083		0.0083	MEC<C, go to Step 5	Y	N		0.0007034		B<C, go to Step 7		No	MEC<C, B<C
106	delta-BHC	No Criteria	Y	Y	0.00064		No Criteria	0.00064	No Criteria	Y	N		0.000042		No Criteria	No Criteria	No	No Criteria
107	Chlordane	0.00059	Y	Y	0.014		All ND, MDL>C, go to Step 5			Y	N		0.00018		B<C, go to Step 7	Effluent monitoring	Undetermined	UD; Effluent MDL>C, B<C
108	4,4'-DDT	0.00059	Y	Y	0.0013		All ND, MDL>C, go to Step 5			Y	N		0.000066		B<C, go to Step 7	Effluent monitoring	Undetermined	UD; Effluent MDL>C, B<C
109	4,4'-DDE	0.00059	Y	Y	0.00097		All ND, MDL>C, go to Step 5			Y	N		0.000693		B>C, MEC=MDL, go to Step 7	Effluent monitoring	Undetermined	UD; Effluent MDL>C, B<C
110	4,4'-DDD	0.00084	Y	N		0.0008		0.0008	MEC<C, go to Step 5	Y	N		0.000313		B<C, go to Step 7		No	MEC<C, B<C
111	Dieldrin	0.00014	Y	Y	0.00077		All ND, MDL>C, go to Step 5			Y	N		0.000264		B>C, MEC=MDL, go to Step 7	Effluent monitoring	Undetermined	UD; Effluent MDL>C, B<C
112	alpha-Endosulfan	0.0087	Y	Y	0.00067		All ND, MDL<C, MEC=MDL	0.00067	MEC<C, go to Step 5	Y	N		0.000031		B<C, go to Step 7		No	MEC<C, B<C
113	beta-Endosulfan	0.0087	Y	N		0.00060		0.00060	MEC<C, go to Step 5	Y	N		0.000069		B<C, go to Step 7		No	MEC<C, B<C
114	Endosulfan Sulfate	240	Y	N		0.0056		0.0056	MEC<C, go to Step 5	Y	N		0.0000819		B<C, go to Step 7		No	MEC<C, B<C
115	Endrin	0.0023	Y	Y	0.00063		All ND, MDL<C, MEC=MDL	0.00063	MEC<C, go to Step 5	Y	N		0.000036		B<C, go to Step 7		No	MEC<C, B<C
116	Endrin Aldehyde	0.81	Y	Y	0.00042		All ND, MDL<C, MEC=MDL	0.00042	MEC<C, go to Step 5	N					No ambient data, go to Step 7	Ambient monitoring	No	MEC<C, No B data
117	Heptachlor	0.00021	Y	N		0.002		0.002	MEC=>C, Effluent Limits Required	Y	N		0.000019		B<C, go to Step 7		Yes	MEC>=C
118	Heptachlor Epoxide	0.00011	Y	Y	0.0012		All ND, MDL>C, go to Step 5			Y	N		0.000094		B<C, go to Step 7	Effluent monitoring	Undetermined	UD; Effluent MDL>C, B<C
119	PCB 1016	0.00017	Y	Y	0.02		All ND, MDL>C, go to Step 5			N					No ambient data, go to Step 7	Eff & Amb monitoring	Undetermined	UD; Effluent MDL>C, No B data
120	PCB 1221	0.00017	Y	Y	0.14		All ND, MDL>C, go to Step 5			N					No ambient data, go to Step 7	Eff & Amb monitoring	Undetermined	UD; Effluent MDL>C, No B data
121	PCB 1232	0.00017	Y	Y	0.06		All ND, MDL>C, go to Step 5			N					No ambient data, go to Step 7	Eff & Amb monitoring	Undetermined	UD; Effluent MDL>C, No B data
122	PCB 1242	0.00017	Y	Y	0.02		All ND, MDL>C, go to Step 5			N					No ambient data, go to Step 7	Eff & Amb monitoring	Undetermined	UD; Effluent MDL>C, No B data
123	PCB 1248	0.00017	Y	Y	0.1		All ND, MDL>C, go to Step 5			N					No ambient data, go to Step 7	Eff & Amb monitoring	Undetermined	UD; Effluent MDL>C, No B data
124	PCB 1254	0.00017	Y	Y	0.08		All ND, MDL>C, go to Step 5			N					No ambient data, go to Step 7	Eff & Amb monitoring	Undetermined	UD; Effluent MDL>C, No B data
125	PCB 1260	0.00017	Y	Y	0.09		All ND, MDL>C, go to Step 5			N					No ambient data, go to Step 7	Eff & Amb monitoring	Undetermined	UD; Effluent MDL>C, No B data
126	Toxaphene	0.0002	Y	Y	0.072		All ND, MDL>C, go to Step 5			N					No ambient data, go to Step 7	Eff & Amb monitoring	Undetermined	UD; Effluent MDL>C, No B data
127	Tributyltin	0.0074	Y	N		0.0072		0.0072	MEC<C, go to Step 5	Y	Y	0.0046		N	B<C, go to Step 7	Eff & Amb monitoring	No	MEC<C, B<C
128	PAHs	15	Y	N					MEC<C, go to Step 5	Y	N		0.052		B<C, go to Step 7		No	MEC<C, B<C

*The lowest applicable saltwater and human health (organisms only) criteria/objective were selected for this RPA.

[b]According to Table 1 of Section (b)(1) of CTR (40CFR 131.38), those criteria should use Basin Plan objectives; criteria for selenium and cyanide are specified by the NTR.

Appendix F-1: Effluent Data for Priority Pollutants (inorganic and organic)

Appendix F-2: RPA Results for Priority Pollutants

These appendices are not electronically attached to this document due to their large size. They are available electronically at the Regional Water Board's website at

http://www.waterboards.ca.gov/sanfranciscobay/tentative_order.htm

These files will be moved to the following address one week prior to the hearing

http://www.waterboards.ca.gov/sanfranciscobay/agenda_aug_06.htm

Appendix F-3
Calculation of Final WQBELs

PRIORITY POLLUTANTS	Copper	Copper	Mercury	Nickel	Zinc	Cyanide	Cyanide	Heptachlor
Basis and Criteria type	CTR SW	BP, SSO	BP, sw	BP, sw	BP sw	CTR SW	BP, SSO	CTR, hh
Dilution Factor (D) (if applicable)	9	9	0	9	9	9	9	0
no. of samples per month	4	4	4	4	4	4	4	4
Applicable Acute WQO	13.1	10.6	2.1	87	196	1	9.4	
Applicable Chronic WQO	10.1	8.1	0.025	13	270	1	2.9	
HH criteria			0.051	4600		220,000	220000	0.00021
Background (max conc for Aq Life calc)	2.55	2.55	0.0086	3.73	5.1	0.4	0.4	0.000024
Background (avg conc for HH calc)	1.8	1.8	0.0037	2.29	2.44	0.4	0.4	3.00E-06
Is the pollutant Bioaccumulative(Y/N)?	N	N	Y	N	N	N	N	Y
ECA acute	108.1	83.4	2.1	836.43	1914.1	6.40	90.40	
ECA chronic	78.1	58.1	0.025	96.43	2654.1	6.4	25.4	
ECA HH			0.051	45979.4		2,199,996	2,199,996	0.00021
No. of data points <10 or atleast 80% of data reported non detect? (Y/N)	N	N	N	N	N	N	N	Y
avg of data points	12.151	12.151	0.0217	5.5083	45.831	2.451	2.451	
SD	3.426	3.426	0.0093	3.2730	25.676	1.540	1.540	
CV calculated	0.28	0.28	0.430	0.594	0.56	0.63	0.63	
CV (Selected) - Final	0.28	0.28	0.43	0.59	0.56	0.63	0.63	0.60
ECA acute mult99	0.55	0.55	0.42	0.32	0.34	0.31	0.31	
ECA chronic mult99	0.73	0.73	0.62	0.53	0.55	0.51	0.51	
LTA acute	59.00	45.55	0.88	270.78	650.82	1.98	27.91	
LTA chronic	56.88	42.36	0.016	51.143	1454.39	3.29	13.04	
minimum of LTAs	56.88	42.36	0.016	51.143	650.82	1.98	13.04	
AMEL mult95	1.25	1.25	1.39	1.55	1.51	1.58	1.58	1.55
MDEL mult99	1.83	1.83	2.40	3.09	2.94	3.24	3.24	3.11
AMEL (aq life)	70.94	52.84	0.02	79.10	984.94	3.12	20.61	
MDEL(aq life)	104.16	77.58	0.04	157.98	1914.10	6.40	42.25	
MDEL/AMEL Multiplier	1.47	1.47	1.73	2.00	1.94	2.05	2.05	2.01
AMEL (human hlth)			0.051	45979		2,199,996	2,199,996	0.00021
MDEL (human hlth)			0.088	91827		4,509,286	4,509,286	0.00042
minimum of AMEL for Aq. life vs HH	71	53	0.022	79	985	3.1	21	0.00021
minimum of MDEL for Aq. Life vs HH	104	78	0.037	158	1914	6.4	42	0.00042
Current limit in permit (30-d avg)	NA	NA	0.21	NA	NA	N/A	N/A	N/A
Current limits in permit (daily max)	23	23	NA	21	580	21	21	N/A
Final limit - AMEL	71	53	0.022	79	990	3.1	21	0.00021
Final limit - MDEL	100	78	0.037	160	1900	6.4	42	0.00042
Max Effl Conc (MEC)	18.4	18.4	0.049	19	205	6.2	6.2	0.002
Interim Limits	N/A	N/A	0.087	21	N/A	N/A	N/A	0.01

Appendix F-4
Receiving Water Bacteriological Data

EAST BAY DISCHARGERS AUTHORITY 07/18/06
RECEIVING WATER DATA
COLIFORM & ENTEROCOCCI RESULTS
1988-2006
FILE: C:\MYFILES\PERMIT EXCEL FILES\NPDES 2006\COLIFORM.XLS

Receiving Water Bacteriological Data

DATE	TOTAL COLIFORM C1	C2	C3	C4	FECAL COLIFORM C1	C2	C3	C4	ENTEROCOCCI C1	C2	C3	C4	Residual Cl2 mg/L
Jan-88	< 2	2	5	5									
May-88	38	2	38	15									
Jun-88	38	2	2	2									
Sep-88	15	2	5	8									
Nov-88	< 2	< 2	< 2	< 2									
Jan-87	21	38	38	38									
May-87	< 2	< 2	< 2	< 2									
Jul-87	5	9	< 2	< 2									
Dec-87	< 2	< 2	< 2	< 2									
Feb-88	< 2	< 2	< 2	2									
Jun-88	< 2	< 2	< 2	< 2									
Oct-88	7	26	5	46									
Dec-88	23	4	< 2	9									
Jan-89	8	2	5	< 2									5.3
May-89	53	17	9	79	2	< 2	< 2	2	2				5.0
Jul-89	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2				5.1
Aug-89	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2				5.1
Sep-89	13	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2				5.2
Oct-89	7	2	2	5	< 2	< 2	< 2	< 2	< 2				4.5
Nov-89	8	5	5	< 2	< 2	< 2	2	< 2	< 2				4.8
Dec-89	< 2	2	< 2	< 2	< 2	< 2	< 2	< 2	< 2				5.9
Jan-90	23	5	2	13	< 2	< 2	2	< 2	2				5.5
Feb-90	4	5	17	2	< 2	2	2	7	< 2				5.8
Mar-90	17	2	2	< 2	5	2	2	< 2	< 2				5.4
Apr-90	2	< 2	5	< 2	< 2	< 2	2	5	< 2				4.3
May-90	< 2	< 2	2	< 2	< 2	< 2	2	< 2	< 2				3.3
Jun-90	< 2	< 2	2	< 2	< 2	< 2	2	< 2	< 2				4.1
Jul-90	8	< 2	2	< 2	< 2	< 2	2	< 2	< 2				4.9
Aug-90	2	< 2	2	< 2	< 2	< 2	2	< 2	< 2				4.3
Sep-90	8	2	2	< 2	< 2	< 2	2	< 2	< 2				4.4
Oct-90	5	2	2	< 2	< 2	< 2	2	< 2	< 2				4.4
Nov-90	3	< 3	3	< 2	3	< 3	3	3	< 3				5.2
Dec-90	2	2	2	8	< 2	2	2	< 2	< 2				5.2
Jan-91	2	< 2	2	2	< 2	< 2	< 2	< 2	< 2				5.7
Feb-91	5	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2				4.9
Mar-91	7	< 2	2	11	< 2	< 2	2	2	< 2				6.5
Apr-91	5	2	< 2	2	< 2	< 2	< 2	< 2	< 2				6.5
May-91	< 2	2	2	< 2	< 2	< 2	< 2	< 2	< 2				6.0
Jun-91	23	< 2	2	< 2	5	< 2	2	2	< 2				6.1
Jul-91	23	23	< 2	5	< 2	< 2	< 2	< 2	< 2				5.1
Aug-91	2	< 2	2	< 2	< 2	< 2	< 2	< 2	< 2				4.4
Sep-91	2	2	2	< 2	< 2	< 2	< 2	< 2	< 2				4.4
Oct-91	49	< 2	< 2	8	5	< 2	< 2	2	5				5.4
Nov-91	350	5	< 2	9	8	< 2	< 2	< 2	< 2				4.7
Dec-91	5	< 2	2	2	2	< 2	2	< 2	< 2				5.2
Jan-92	11	5	11	5									6.0
Feb-92	22	8	11	< 2									5.5
Mar-92	< 2	< 2	< 2	< 2									5.7
Apr-92	2	< 2	< 2	< 2									5.4
May-92	< 2	< 2	< 2	< 2									4.6
Jun-92	< 2	< 2	< 2	< 2									4.7
Jul-92	2	< 2	< 2	< 2									3.9
Aug-92	< 2	< 2	< 2	< 2									3.9
Sep-92	2	4	< 2	4									4.6
Dec-92	< 2	< 2	2	5									5.1
Apr-93	2	< 2	2	< 2									6.1
Jun-93	2	2	< 2	4									5.3
Sep-93	< 2	< 2	< 2	2									4.9
Dec-93	110	< 2	2	< 2									5.5
Mar-94	< 2	< 2	< 2	2									5.7
Jun-94	< 2	< 2	< 2	4									4.3
Jul-94	4	4	2	23	< 2	< 2	< 2	2					4.5
Aug-94	4	4	< 2	4	< 2	< 2	< 2	< 2					4.4
Sep-94	< 2	< 2	< 2	8	< 2	< 2	< 2	< 2					3.7
Oct-94	< 2	< 2	< 2	4	< 2	< 2	< 2	< 2					4.0
Nov-94	23	2	11	8	< 2	< 2	4	4					3.6
Dec-94	4	2	< 2	< 2	2	< 2	< 2	< 2					3.6

EAST BAY DISCHARGERS AUTHORITY 07/18/06
RECEIVING WATER DATA
COLIFORM & ENTEROCOCCI RESULTS
1985-2006
FILE: [illegible]

Receiving Water Bacteriological Data

Jan-95	< 2	170	50	2	< 2	22	7	2					3.9
Feb-95	2	2	6	13	< 2	2	4	< 2					2.8
Mar-95	13	4	2	< 2	< 2	< 2	2	< 2					3.5
Apr-95	13	8	< 2	2	< 2	2	< 2	2					3.4
May-95	8	< 2	< 2	4	2	< 2	< 2	2					3.2
Jun-95	4	2	< 2	2	< 2	< 2	< 2	< 2					3.1
Sep-95	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2					2.3
Dec-95	4	< 2	2	2	2	< 2	< 2	< 2					2.3
Mar-96	11	4	2	2	< 2	2	< 2	2					2.4
Jun-96	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2					2.0
Sep-96	4	< 2	< 2	< 2	2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	2.2
Dec-96	7	< 2	< 2	4	4	< 2	< 2	2	< 2	< 2	< 2	< 2	3.4
Mar-97	< 2	4	< 2	2	< 2	< 2	< 2	2	< 2	< 2	< 2	< 2	3.3
Jun-97	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	2.7
Sep-97	110	< 20	< 20	20	< 2	< 2	< 2	< 2	2	< 2	< 2	< 2	1.1
Dec-97	80	40	20	110	20	20	20	70	< 2	2	< 2	4	2.5
Mar-98	4	8	2	13	4	< 2	2	13	< 2	< 2	< 2	< 2	2.0
Jun-98	7	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	2.4
Sep-98	9	< 2	< 2	< 2	2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	1.6
Dec-98	3000	210	80	3000	40	< 20	20	70	7	< 2	< 2	< 2	2.2
Mar-99	< 2	2	< 2	< 2	2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	2.3
Jun-99	< 2	< 2	2	2	< 2	< 2	2	2	< 2	< 2	< 2	< 2	1.4
Sep-99	< 2	< 2	2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	2	1.9
Dec-99	4	23	2	7	2	2	< 2	4	< 2	2	< 2	2	2.6
Mar-00	50	17	4	13	2	< 2	2	4	2	< 2	< 2	< 2	2.8
Jun-00	2	< 2	2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	1.5
Sep-00	< 2	2	8	2	< 2	2	8	2	< 2	< 2	< 2	2	1.1
Dec-00	< 2	< 2	< 2	2	9	< 2	< 2	2	6	< 2	< 2	< 2	1.6
Mar-01	< 2	2	< 2	< 2	< 2	< 2	< 2	< 2	2	< 2	< 2	8	1.9
Jun-01	2	< 2	2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	1.1
Sep-01	130	26	13	23	34	4	2	< 2	13	4	2	< 2	1.0
Dec-01	11	7	30	4	2	< 2	7	< 2	< 2	2	2	< 2	1.6
Mar-02	13	2	2	8	< 2	2	< 2	< 2	< 2	< 2	< 2	< 2	1.6
Jun-02	12	22	2	< 2	2	< 2	< 2	< 2	< 2	2	< 2	< 2	1.3
Sep-02	4	2	< 2	4	2	< 2	< 2	2	< 2	< 2	< 2	< 2	0.7
Dec-02	< 2	2	< 2	< 2	< 2	2	< 2	< 2	< 2	2	< 2	< 2	1.9
Mar-03	11	< 2	2	2	< 2	< 2	< 2	< 2	7	< 2	< 2	< 2	1.7
Jun-03	2	2	< 2	2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	2	0.57
Sep-03	80	20	20	130	2	2	2	2	< 2	< 2	< 2	2	0.42
Dec-03	< 2	4	8	13	< 2	4	8	13	< 2	< 2	< 2	< 2	0.70
Mar-04	4	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0.44
Jun-04	4	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0.12
Sep-04	17	< 2	< 2	4	4	< 2	< 2	< 2	2	< 2	< 2	< 2	0.16
Dec-04	< 2	4	2	2	< 2	4	< 2	2	< 2	< 2	< 2	2	0.22
Mar-05	4	< 2	< 2	4	< 2	< 2	< 2	2	< 2	< 2	< 2	2	0.67
Jun-05	8	< 2	< 2	4	2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0.11
Sep-05	2	< 2	< 2	2	< 2	< 2	< 2	< 2	8	< 2	< 2	< 2	0.31
Dec-05	4	2	8	2	< 2	< 2	8	2	11	8	< 2	4	0.44
Mar-06	< 2	2	2	< 2	< 2	2	< 2	< 2	< 2	< 2	4	2	0.59
Jun-06	4	< 2	< 2	< 2	4	< 2	< 2	2	< 2	< 2	< 2	< 2	0.60
Sep-06													
Dec-06													
MEAN	< 40	< 8	< 5	< 33	< 3	< 3	< 3	< 4	< 3	< 2	< 2	< 2	3.4
MINIMUM	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	0.1
MAXIMUM	3000	210	80	3000	< 40	22	< 20	70	< 13	< 8	< 4	< 8	6.5
# SAMPLES	117	117	117	117	87	87	87	87	40	40	40	40	104
# > 500	1	0	0	1	0	0	0	0	0	0	0	0	
# > 1100	1	0	0	1	0	0	0	0	0	0	0	0	

Appendix F-5
Mercury Mass Limit Calculation

Date	Flow (MGD)	Hg (µg/L)	Monthly mass loading (kg/mo)	12-month Moving Average Loading (kg/mo)	ln(MA)
1/3/2001	78.16	0.031	0.2789		
2/7/2001	83.16	0.013	0.1244		
3/7/2001	80.96	0.011	0.1025		
4/2/2001	75.49	0.016	0.1390		
5/2/2001	70.04	0.015	0.1209		
6/6/2001	68.50	0.013	0.1025		
7/11/2001	66.73	0.014	0.1075		
8/1/2001	67.04	0.014	0.1080		
9/5/2001	66.92	0.034	0.2619		
10/3/2001	66.71	0.034	0.2611		
11/7/2001	74.16	0.021	0.1793		
12/5/2001	86.81	0.015	0.1499	0.1613	-1.8243
1/2/2002	82.36	0.038	0.3602	0.1681	-1.7832
2/6/2002	79.49	0.025	0.2287	0.1768	-1.7328
3/6/2002	76.13	0.02	0.1753	0.1829	-1.6991
4/3/2002	72.29	0.038	0.3162	0.1931	-1.6445
5/1/2002	71.63	0.026	0.4273	0.2153	-1.5358
6/5/2002	70.02	0.03	0.2496	0.2177	-1.5244
7/10/2002	66.97	0.033	0.2544	0.2273	-1.4816
8/7/2002	66.40	0.04	0.3057	0.2418	-1.4197
9/4/2002	65.88	0.031	0.2351	0.2509	-1.3827
10/2/2002	69.45	0.024	0.1918	0.2569	-1.3591
11/6/2002	74.98	0.019	0.1640	0.2499	-1.3867
12/4/2002	89.27	0.023	0.2363	0.2481	-1.3938
1/8/2003	85.65	0.019	0.1873	0.2487	-1.3915
2/5/2003	74.25	0.029	0.2478	0.2557	-1.3637
3/5/2003	77.21	0.023	0.2044	0.2446	-1.4082
4/2/2003	80.82	0.032	0.2977	0.2552	-1.3657
5/7/2003	75.77	0.049	0.4273	0.2638	-1.3327
6/4/2003	71.71	0.017	0.1403	0.2417	-1.4202
7/2/2003	71.20	0.019	0.1557	0.2345	-1.4505
8/6/2003	68.17	0.013	0.1020	0.2227	-1.5018
9/4/2003	69.33	0.016	0.1277	0.2090	-1.5652
10/1/2003	69.52	0.019	0.1520	0.2027	-1.5963
11/5/2003	74	0.0149	0.1269	0.1977	-1.6212
12/3/2003	81.22	0.00866	0.0810	0.1913	-1.6541
1/7/2004	81.83	0.014	0.1319	0.1832	-1.6970
2/4/2004	85.22	0.024	0.2354	0.1869	-1.6770
3/3/2004	77.88	0.0167	0.1497	0.1794	-1.7182
4/7/2004	72	0.0139	0.1152	0.1725	-1.7572
5/5/2004	70.76	0.0123	0.1002	0.1348	-2.0038
6/2/2004	68.34	0.0142	0.1117	0.1324	-2.0216
7/7/2004	68.79	0.0182	0.1441	0.1315	-2.0289
8/4/2004	69.49	0.0145	0.1160	0.1326	-2.0201
9/1/2004	71.45	0.035	0.2878	0.1460	-1.9242
10/6/2004	74.64	0.0144	0.1237	0.1436	-1.9405
11/3/2004	73.6	0.0161	0.1364	0.1444	-1.9350
12/1/2004	78.91	0.0111	0.1008	0.1461	-1.9237
			Average	0.200	-1.635
			Stdev	0.043	0.226
			99.87th %ile (mean+3 standard deviations) – mass limit		**0.384**

Appendix F-6
General Basis for Final Compliance Dates [1]
for Discharges North of the Dumbarton Bridge
Revised March 23, 2006

Constituent	Reference for applicable standard	Maximum compliance schedule allowed	Compliance date and Basis
Cyanide Selenium	NTR	10 years	**10-yr, but no later than April 28, 2010** (10 years from effective date of SIP). Basis is the Basin Plan, see note [2].
Copper (salt)	CTR	5 years	**5-yr, but no later than May 18, 2010.** Bases are CTR and SIP. See note [4]
Mercury PAH EPA 610	Numeric Basin Plan (BP)	10 years	**10-yr, but no later than April 28, 2010,** which is 10 years from effective date of SIP (April 28, 2000). Basis is the Basin Plan, See note [2a].
Arsenic Cadmium Chromium (VI) Copper (fresh) Lead Nickel Silver (CMC) Zinc	Numeric BP	10 years	**10-yr, but no later than January 1, 2015.** This is 10 years (using full months) from effective date of 2004 BP amendment (January 5, 2005). Basis is the Basin Plan section 4.3.5.6. See note [2b]. Also, see note [3] for permits issued prior to effective date of 2004 BP amendment.
Dioxins/Furans Tributyltin Other toxic pollutants not in CTR	Narrative BP using SIP methodology	10 years	**10-yr from effective date of permit** (which is when new standard is adopted; no sunset date). Basis is the Basin Plan, see note [2c].
Other priority pollutants on CTR and not listed above	CTR	5 years	**5-yr, but no later than May 18, 2010** (this is 10 years from effective date of CTR/SIP). Basis is the CTR and SIP. See note [4]

[1] These dates are maximum allowable compliance dates applicable. As required by the Basin Plan, CTR, SIP, and 40CFR122.47, compliance should be as short as possible. These are only applicable for discharges north of the Dumbarton Bridge because applicable criteria for the south bay are different than those cited above.

a. For pollutants where there are planned TMDLs or SSOs, and final WQBELs may be affected by those TMDLs and SSOs, maximum timeframes may be appropriate due the uncertain length of time it takes to develop the TMDL/SSO.

b. However, for pollutants without planned TMDLs or SSOs, the State Board in the EBMUD remand order (WQO 2002-0012), directs the Regional Board to establish schedules that are as short as feasible in accordance with requirements.

[2] The Basin Plan provides for a 10-year compliance schedule for implementation of measures to comply with new standards as of the effective date of those standards. This provision has been construed to authorize compliance schedules for new interpretations of existing standards, such as the numeric and narrative water quality objectives specified in the Basin Plan, if the new interpretations result in more stringent limits than in the previous permit.

c. For the numeric standards and objectives in place prior to the SIP (these include the 1995 Basin Plan objectives, and NTR criteria that were implemented in accordance with the Basin Plan), due to the adoption of the SIP, the Water Board has newly interpreted these objectives and standards. The effective date of this new interpretation is the effective date of the SIP (April 28, 2000) for implementation of these numeric Basin Plan objectives.

d. For numeric objectives for the seven pollutants adopted in the 2004 Basin Plan (amendments), the Water Board has newly adopted these objectives. The effective date of these new objectives is the approval date of the 2004 Basin Plan by U.S. EPA (January 5, 2005) for implementation of these numeric Basin Plan objectives. December is the last full month directly preceding the sunset date. Compliance should be set on the first day of the month to ease determination of monthly average limits. Therefore, compliance must begin on January 1, 2015.

e. For narrative objectives, the Board must newly interpreted these objectives using best professional judgment as defined in the Basin Plan for each permit. Therefore, the effective date of this new interpretation will be the effective date of the permit.

[3] The schedules established in permits effective prior to the 2004 Basin Plan (amendments) should be continued into subsequent permits reissued after the 2004 Basin Plan. For example, Permit XX, adopted Nov 2004 became effective Feb 1, 2005. Permit XX establishes a compliance schedule for copper to end April 1, 2010. When next reissued in 2010, the compliance deadline for the same copper limit should remain April 1, 2010. However, if in applying the 2004 BP objective results in a more stringent limit for copper, then a new compliance schedule may extend to the new date in 2015, provided discharger XX justifies the need for the longer compliance schedule.

[4] Permits effective after SIP/CTR that specified 5-yr compliance schedules pursuant to SIP §2.1for CTR pollutants do not qualify for another compliance schedule for those same CTR pollutants during reissuance.

a. An exception to this would be if new data collected during the term of the permit results in more stringent limitations, then a compliance schedule may be allowable for the more stringent limits up to May 18, 2010.

b. Another exception applies to pollutants granted a compliance schedule pursuant to the 2000 SIP §2.2.2, Interim Requirements for Providing Data (note 2005 SIP amendment deleted this section as it is not applicable to permits effective after May 18, 2003). Because SIP §2.1 provides for a maximum 5-year compliance schedule, and permittees granted §2.2.2 schedules have not been previously granted such a schedule under §2.1, those permittees who can demonstrate infeasibility to achieve immediate compliance with limits calculated using the data collected, qualify for a §2.1 schedule up to the maximum statutory date (April 28, 2010).

Cyanide was one pollutant for which the Water Board granted a §2.2.2 compliance schedules to collect better ambient data for cyanide, because the Regional Monitoring Program data were not complete primarily due to inadequate detection limits. BACWA and WSPA funded an effort to collect these data as part of the collaborative receiving water monitoring for other CTR pollutants. The Regional Water Board has received these data, which form the basis for current permits. However, upon further consideration, the SIP §2.2.2 compliance schedule was granted in error, because cyanide is an NTR criterion and not a CTR criterion, and the SIP compliance schedule provisions apply to "...CTR criterion and/or effluent limitations." Thus, it is more appropriate to apply the Basin Plan's compliance schedule provision, which was the implementation tool for NTR criteria prior to the SIP superceding the provisions in the Basin Plan related to calculation of water quality based effluent limitations. As such, the compliance schedule for cyanide should follow note [2a], above.

Appendix F-7
EBDA Feasibility Analysis
May 19, 2006

Introduction

This study of the feasibility of achieving compliance with proposed effluent limits for mercury is being provided in response to the water quality-based effluent limitations that are proposed in the East Bay Dischargers Authority's (EBDA) National Pollutant Discharge Elimination System (NPDES) permit renewal.

EBDA and its member agencies (Hayward, San Leandro, Oro Lomo/Castro Valley, and Union Sanitary District) and the Livermore-Amador Valley Water Management Agency (LAVWMA) and its member agencies (Dublin-San Ramon Services District and City of Livermore) are Joint Exercise of Powers Agencies (JEPA) that collect and treat wastewater collected from domestic, commercial, and industrial sources. By contract, each of these individual agencies transport treated effluent to a joint outfall that is owned and operated by EBDA.

Discharge to Lower San Francisco Bay is regulated by National Pollutant Discharge Elimination System (NPDES) Permit No. CA0037869. The currently permitted average dry weather design flow for the joint outfall is 97.1 million gallons per day (MGD). The joint outfall, which is located in Lower San Francisco Bay, west of the Oakland International Airport, at longitude 122°17'42" W, latitude 37°41'40" N, provides a minimum initial dilution of greater than 10:1 at all times.

Background

In March 2000, *The Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP) established statewide policy for NPDES permitting. The SIP provides for the situation where an existing NPDES discharger cannot immediately comply with an effluent limitation derived from a *California Toxics Rule* (CTR) or Basin Plan criterion. The SIP allows for the adoption of interim effluent limitations and a schedule to come into compliance with the final limit in such cases. To qualify for interim limits and a compliance schedule, the SIP requires that an existing discharger demonstrate that it is infeasible to achieve immediate compliance with the CTR-, NTR- or Basin Plan-based limit.
The term "infeasible" is defined in the SIP as "not capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors".

The SIP requires that the following information be submitted to the Regional Water Board to support a finding of infeasibility:

- Documentation that diligent efforts have been made to quantify pollutant levels in the discharge and sources of the pollutant in the waste stream, including the results of those efforts;
- Documentation of source control and/or pollution minimization efforts currently under way or completed;

- A proposed schedule for additional and future source control measures, pollutant minimization, or waste treatment; and
- A demonstration that the proposed schedule is as short as practicable.

The following analysis pertains to the proposed water quality-based effluent limitations.

Effluent Limit Attainability

The proposed final and interim effluent limits for mercury, cyanide, and heptachlor are compared to the maximum observed effluent concentration in Table 1.

Table 1. Proposed Effluent Limits for East Bay Dischargers Authority

Pollutant	Water Quality-Based Effluent Limits (µg/L)		Performance Based Interim Effluent Limits (µg/L)		Maximum Effluent Concentration (µg/L)
	AMEL	MDEL	Daily Maximum	Monthly Average	
Mercury	0.022	0.037	--	0.087	0.049
Cyanide	3.2	6.4	21	--	6.2
Heptachlor	0.00021	0.00042	--	0.01	0.002

The final effluent limits shown above are calculated using procedures described in Section 1.4 of the SIP. Background values are based on the San Francisco Estuary Institute's (SFEI) Regional Monitoring Program for Trace Substances (RMP) data collected at the Yerba Buena station. Dilution was taken as 10:1 (receiving water to effluent) and the receiving water was classified as saltwater. Other variables in the effluent limitation calculation included coefficient of variation for different pollutants in different effluents.

Maximum observed effluent concentrations are based on recent effluent quality data (2001-2004). As shown in Table 1, EBDA will not be able to immediately comply with the proposed effluent limits for mercury, cyanide, and heptachlor. Heptachlor has not been detected at levels above quantitation limits. The feasibility analyses for these constituents are shown below.

Mercury

Source Control and Pollution Prevention Efforts

EBDA is an active participant and supporter of several region-wide workgroups and programs, including the following:

- Bay Area Pollution Prevention Group (BAPPG);
- Bay Area Clean Water Agencies (BACWA);
- EBDA Pretreatment Committee;
- Alameda County Environmental Task Force;
- Alameda County Green Business Program;
- California Water Environment Association (CWEA) Industrial & Hazardous Waste Committee;

- Bay Area Hazardous Waste Reduction Committee; and
- Alameda County Clean Water Program.

Source control and pollution prevention efforts for the individual EBDA agencies are described below.

Union Sanitary District

The Union Sanitary District's (USD) pretreatment program regulates 36 categorical industrial users including 18 metal finishers, 12 electronic component/semiconductor manufacturers, 1 metal molding/casting facility, one organic chemical facility, one centralized waste treatment facility, and 3 pharmaceutical manufacturers. The pretreatment program also regulates 7 non-categorical significant industrial users. USD also has an active pollution prevention program that has been in place since the early 1990s. USD has identified mercury as a pollutant of concern and has developed several programs over the years targeting mercury sources including programs for dentists and a thermometer exchange program.

USD has conducted several source identification and pollution prevention activities for mercury sources. USD evaluated sources of mercury in 2000 and estimated that dental offices contribute approximately 60% of mercury influent load with human waste being estimated as the next largest source. USD began a Mercury Thermometer Exchange Program in 1999 establishing three ongoing locations at which residents can exchange a mercury thermometer for a digital thermometer. Through August 2003, USD has collected and recycled over 25 lbs of mercury through this program. USD began working with dentists in 2001 by conducting site visits and distributing information on recommended Best Management Practices (BMPs) for managing amalgam waste. USD has provided information to dentists though the local dental society monthly newsletters. In addition, USD staffed a booth at the California Dental Association conference in September 2002 and is planning to make a presentation to dental resident students at the University of Pacific campus in Union City. USD plans to continue its ongoing programs for thermometer exchanges and dentists. In addition, USD is planning to implement programs targeting fluorescent lamp recycling, recycling of switches and thermostats, and hospital and medical facilities.

USD also conducts general outreach pollution prevention activities including:

- Participation in public events including City of Fremont Earth Day, Steel Head Festival, BFI Safety Fair;
- *Protecting Your Bay*, Pollution Prevention quarterly newsletter;
- Pollution Prevention Web Page (www.unionsanitary.com/p2site)
- On-site consultations to dental office,
- Distribution of information flyers and Best Management Practices (BMPs) sheets for mercury reduction and disposal; and
- Elementary school classroom presentations since 1995.

City of Hayward

The City of Hayward's Pretreatment Program, administered by Water Pollution Source Control (WPSC) staff, currently regulates nearly 100 significant industrial users, including 38 categorical industrial users. Categorical users in Hayward include metal finishers, pharmaceutical manufacturers, and users in the electronic crystal

category. WPSC concurrently administers an established Pollution Prevention Program and also the City's Stormwater Management Program.

Mercury was designated by Hayward as a pollutant of concern in 2001, and Hayward has since then undertaken, and continues to undertake, a variety of source investigation, pollution prevention, and public outreach activities related to mercury.

Source Investigation

- WPSC staff monitors each significant industrial user at least twice per year for mercury.
- Mercury samples are additionally collected samples from residential and commercial manhole locations twice per year.
- The mercury recycling facility in Hayward is monitored regularly for mercury, currently at a frequency of four times per year.
- WPSC staff recently conducted an analysis of five years of treatment plant, industrial, residential, and commercial sampling data for mercury and computed load allocations. Results indicated an overall decrease in industrial mercury loading from 2000-2001 to the present.

Pollution Prevention

- The City implemented an Administrative Rule in 2005 that directs City staff to properly recycle mercury-containing lamps and minimize the use of mercury-containing products whenever possible.
- In 2005, WPSC staff attended *Pollution Prevention for Hospitals* and *Dental Office Pollution Prevention* workshops, both of which focused on mercury.
- Over the last few years, WPSC staff worked with Hayward hospitals to implement mercury pollution prevention efforts. The hospitals made serious efforts to eliminate mercury from their facilities, by replacing mercury-containing medical devices, laboratory solutions, and thermometers with non-mercury versions whenever possible. Sample results indicating lower mercury concentrations in hospital discharge demonstrate the success of these efforts.

Public Outreach

- For several years now, the City has held "*Thermometer Trade-In*" (exchanging mercury for digital) events throughout the City. WPSC now conducts an ongoing exchange program, and with information available on the City's web site. When the City conducts discrete thermometer exchange events, staff distributes educational material regarding other mercury-containing products and proper disposal of mercury waste.
- Several years ago WPSC staff created an educational display entitled "*Got Mercury?...Be Environmentally Smart*". This innovative display has been exhibited at community events such as the Hayward Chamber of Commerce Business Expo and local Earth Day fairs.
- Since 2003, the City has participated with three other cities in the planning and development of the popular *Caring for the Environment* calendar. Generally, at least one monthly topic focuses on mercury.
- As part of the Alameda Countywide Clean Water Program (ACCWP), WPSC staff helped created a mercury information outreach piece focusing on fluorescent lamps. Through ACCWP, this fact sheet was distributed to over 2000 commercial and industrial property owners in 2005.

- WPSC staff recently created an educational mercury outreach flyer directed at Hayward dentists. Distribution of this educational flyer, which focuses on mercury best management practices, commenced in 2006.

City of Livermore

The City of Livermore's pretreatment program regulates 11 categorical industrial users , 14 non-categorical significant industrial users, five photo processors and 50 facilities with vehicle-equipment wash-pads. Livermore has implemented a pollution prevention program since 1993.
The P2 program conducts a variety of efforts targeting mercury sources including hospital/medical offices, dental offices, other commercial businesses, Lawrence Livermore National Laboratory (LLNL), and residential sources. These efforts are described below.

Livermore has focused its medical outreach on Valley Medical Center providing mercury outreach materials and a self-assessment audit checklist to its staff. Livermore conducted sampling at representative dental offices to assess mercury loads from dental offices. Pollution prevention permits were issued to all dentists along with outreach materials developed by the BAPPG. Dental offices are each inspected once during the 5-year term of their permit. Livermore reviews sampling data from other permitted dischargers and addressed mercury related issues as needed. They also distribute information on fluorescent bulb recycling to local businesses.

Livermore has reviewed historic mercury data from LLNL and conducted outreach to assist LLNL in identifying potential sources of mercury discharges at the facility. Livermore is currently working with LLNL to determine areas of historic mercury used and potential mercury contamination in the sewer system at the facility.

Livermore also conducts outreach that includes mercury information at a range of public events including Honey & Wine Festival, Earth Day Creek Clean Up, and the Livermore Children's Festival. Livermore also has an ongoing mercury thermometer exchange program.

Livermore also conducts general outreach programs including plant tours for public and private school groups, participation in the Livermore Summer Science Program and in the Livermore Valley Joint Unified School District's Science and Technology Odyssey. Livermore also offers the Sewer Science curriculum to local high schools.

Livermore plans to continue ongoing programs targeting medical and dental offices.

City of San Leandro

The City of San Leandro's pretreatment program regulates 10 categorical industrial users including three metal finishing, four metal molding and casting, one paint manufacturing, two ink manufacturing, and one pulp, paper, and paperboard manufacturing point sources. The pretreatment program also regulates three non-categorical significant industrial users; two are food processors and one is a closed landfill. In addition pretreatment permits are issued to 38 facilities that are monitored with respect to their compliance with local limits, 21 food manufacturers, and four special dischargers. San Leandro has worked with its paint manufacturer to eliminate mercury containing materials and is currently working with a medical waste facility that has installed pretreatment to reduce mercury discharges. In addition, the City of San Leandro has implemented a Pollution Prevention (P^2) Program

since January 1, 1993. San Leandro received a Water Quality Excellence Award for P2 Achievement in March 2006 from the Regional Water Board for "heroic efforts in P2". Through the P2 program, San Leandro has instituted several programs that target mercury sources

City of San Leandro has required pretreatment of dental wastewater through the building permit review, conditions and approval process for over 15 years. Building permit conditions for dental offices require the installation of amalgam traps at chair side and on the entire vacuum system. The level of treatment and approved treatment systems have changed with technology and understanding of the waste stream.

In January 2006 on behalf of Ca Dept of Toxic Substances Control and Ca Dept of Health Services, the City of San Leandro presented a certificate of appreciation to Eden Medical Center – San Leandro Hospital for their exemplary efforts in reducing mercury usage. This milestone was achieved through the Hospitals for a Healthy Environment initiative in partnership with Ca Healthcare Assoc, Ca Water Environment Assoc, DTSC, DHS and the local agencies.

San Leandro has adopted an Environmentally Preferable Purchasing Policy that specifies product substitution for products containing mercury and gives preference to vendors that implement mercury recovery programs. Outdoor City lighting is undergoing conversion to mercury-free lamps. Mercury lamp universal waste information is also distributed at facility inspections.

In addition to its programs targeting mercury, San Leandro implements programs targeting FOG, pesticides and copper. San Leandro also has a wide range of general P2 activities including:

- Public events including the San Leandro Creek Watershed Festival, District-wide neighborhood clean-ups, and the San Leandro Environmental Forum.
- School programs including elementary school program on the water environment presented by Rock Steady Juggling, Watershed Adventures presentation to junior high schools, and a Healthy Schools Inside & Out teachers' workshop.
- Website providing information, downloadable materials, contact information and an interactive page allowing residents and businesses to report spills and other incidents of pollution.
- Green waste programs promoting collection of green waste and food scraps.

San Leandro plans to continue ongoing projects and complete phase-out of mercury containing lamps in outdoor City lighting.

Dublin San Ramon Services District

Dublin San Ramon Services District's (DSRSD) pretreatment program regulates 44 permitted non-domestic dischargers. There are 12 non-categorical significant industrial users (SIUs.) There is one categorical industrial user (CIU) who is permitted as a zero-discharger. The other 31 permitted non-domestic dischargers consist of laboratories, photo processors, and other non-significant dischargers.

DSRSD's Pollution Prevention Program has been in place since 1993. Mercury is currently identified as a pollutant of concern and the DSRSD has conducted a range of activities targeting mercury sources. Dental offices were initially inspected in 1995 as part of the silver program. Mercury wastes were also evaluated and DSRSD staff recommended practices to reduce mercury discharges. The

DSRSD is in the process of reinspecting dental offices. DSRSD also conducts a mercury thermometer exchange program and accepts other mercury containing wastes including fluorescent tubes, thermostats and thermometers. DSRSD has worked with Kaiser Permanente and Valley Care Health system to eliminate the use of mercury containing equipment and products. Another industry, National Food Laboratories, has established a protected storage area for fluorescent lamps prior to recycling.

DSRSD implements programs targeting vehicle service facilities, printers, photo processors, and restaurants. The District conduct public outreach programs including the Green Business Program, Sewer Science classes for the high schools, and Project WET (Water Education for Teachers) workshops. They present assemblies and classroom programs at local elementary and middle schools. The District also participates in Pollution Prevention Week, Earth Day and other local events.

DSRSD plans to continue its thermometer/ mercury collection program and re-advertise the program and to conduct dental inspections.

Oro Loma Sanitary District

Oro Loma Sanitary District's (OLSD) pretreatment program regulates six non-categorical significant industrial users and does not regulate any categorical users. The permitted industries are primarily food manufacturers.

In addition, OLSD implements a P2 program under which mercury has been identified as a pollutant of concern. OLSD monitors potential mercury sources including dental offices hospitals and other point source location to gather data on mercury concentrations. Information regarding mercury is posted on their website.

The OLSD also conducts general P2 programs including distributing a newsletter and calendar and maintaining a website. They conduct a curbside used motor oil collection program and a recycling program at District schools.

OLSD plans to continue ongoing efforts to evaluate dental offices and other mercury sources.

Cyanide

Treatment plant performance and pollution prevention efforts regarding cyanide are discussed below.

EBDA effluent characteristics for cyanide indicate that immediate compliance with the final effluent limits is not possible. Effluent cyanide concentrations during the January 2001 through December 2004 period range from <3 μg/L to 6.2 μg/L (48 samples). The maximum observed effluent concentration of 6.2 μg/L would result in permit violations at the proposed AMEL of 3.2 μg/L. Therefore, an interim effluent limit for cyanide and a compliance schedule to attempt to meet final cyanide limits should be granted.

As the Regional Water Board has noted previously, "Cyanide is a regional problem associated with the analytical protocol for cyanide analysis due to matrix inferences. A body of evidence exists to show that cyanide measurements in effluent may be an artifact of the analytical method. This question is

being explored in a national research study sponsored by the Water Environment Research Foundation (WERF)." (2002 Napa Sanitation District Permit Amendment).

EBDA has concerns about the occurrence of artifactual (false positive) cyanide as evidenced by effluent concentrations greater than influent concentrations. The District supports efforts to develop a site-specific objective for cyanide in the Bay, given that cyanide does not persist in the environment and that the current water quality objective (WQO) was based on testing with East Coast species. A cyanide SSO for Puget Sound, Washington, using West Coast species has been approved by EPA Region X. The Permittee is participating in a regional effort to conduct a study for development of site-specific objectives. The cyanide study plan was submitted on October 29, 2001. A final report was submitted to the Regional Water Board on June 29, 2003. The Basin Plan Amendment is currently being developed. The Regional Water Board has indicated that it intends to include a final limit based on the study results.

A review of cyanide influent data shows that cyanide has rarely been detected in the influent and is rarely present at levels exceeding effluent levels. Therefore, it is unlikely that there are cyanide sources to the District's influent. Instead, cyanide is most likely generated in the treatment process. Therefore, rather than pursuing pollution prevention which would not be effective for cyanide, the District has supported regional cyanide projects. As a member of BACWA, the District is supporting BACWA's efforts to work with the Regional Water Board to develop a site-specific objective for cyanide. The District has supplied information regarding treatment plant cyanide levels and other requested information to BACWA in support of this effort.

Heptachlor

EBDA and its member agencies believe that the data for heptachlor does not have sufficient data quality to warrant its use in a reasonable potential analysis. A separate analysis was prepared to justify the removal of erroneous data from the dataset. However, in case the Regional Water Board still deems it necessary to provide an effluent limit for one or more of these banned pesticides, the District provides this information to support the application of an interim limit.

The laboratory reported one heptachlor monitoring event (out of a total of 23 events) in which heptachlor was detected in the effluent, but not quantified. This detected value was estimated at a concentration of 0.002 μg/L. Since this value is above the applicable water quality criterion of 0.00021 μg/L, EBDA will not be able to comply with the proposed final limits.

Most uses of heptachlor were banned by 1986 and it has not been registered in California for several years. Heptachlor epoxide is a breakdown product of heptachlor. Therefore, it is unlikely that there are effective source control strategies available to address this compound.

Some EBDA agencies currently conduct pesticide source control, mostly in the form of public education and outreach activities, and these activities will continue.

Summary

Based upon the above analysis, EBDA concludes that it is infeasible to meet the final effluent limitations proposed in the permit for mercury, cyanide, and heptachlor. Furthermore, it is expected to remain infeasible within a five-year time schedule to meet these limits. As described in this plan,

however, EBDA member agencies will continue to conduct current pollution prevention activities and work to implement planned programs for the future. Activities for the future are summarized in Table 2 below.

Table 2. Proposed Source Control Actions

Constituent	Proposed Action	Estimated Time to Complete
Mercury	*All agencies (individually or combined):*	
	• Continue participation in the many region-wide workgroups and programs indicated on page 2 above.	• Ongoing
	Union Sanitary District:	
	• Continue existing activities targeting dentists, thermometer exchanges, other mercury containing equipment	• Ongoing
	• Coordinate with the cities in the Districts service area to develop and implement a program for hospitals and medical facilities	• December 2007
	City of Hayward:	
	• Continue thermometer exchange program	• Ongoing
	• Provide distribution of education flyer on mercury directed at Hayward dentists	• December 2006
	City of Livermore:	
	• Continue inspection of dental offices once per 5-year permit term	• Ongoing
	• Continue working with Lawrence Livermore National Laboratory to determine areas of historic mercury used and potential mercury contamination in the sewer system at the facility	• Ongoing
	City of San Leandro:	
	• Continue to require installation of amalgam traps in dental offices as part of building permit review.	• Ongoing
	• Continue to implement City's Environmentally preferable Purchasing Policy that specifies product substitution for products containing mercury and give preference to vendors that implement mercury recovery programs	• Ongoing
	Dublin San Ramon Services District:	
	• Reinspect dental offices	• December 2007
	• Continue thermometer/mercury collection program and re-advertise the program	• Ongoing
	Oro Loma/Castro Valley Sanitary District:	
	• Continue to monitor potential mercury sources including dental offices and hospitals	• Ongoing
	• Continue to post mercury information on website	• Ongoing
Cyanide	*All agencies:*	

Constituent	Proposed Action	Estimated Time to Complete
	• Continue monitoring influent and effluent to further characterize cyanide	• Ongoing
Heptachlor	*All agencies:* • Continue existing pesticide public education and outreach activities	• Ongoing

ATTACHMENT G – REGIONAL WATER BOARD ATTACHMENTS

The following documents are part of this Order but are not physically attached due to volume. They are available on the Internet at: http://www.waterboards.ca.gov/sanfranciscobay/Download.htm.

- Self-Monitoring Program, Part A (August 1993)
- Standard Provisions and Reporting Requirements, August 1993
- Regional Water Board Resolution No. 74-10
- August 6, 2001 Regional Water Board staff letter, "Requirement for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy"

ATTACHMENT H - PRETREATMENT REQUIREMENTS

Pretreatment Program Provisions

1. The Discharger shall implement all pretreatment requirements contained in 40 CFR §403, as amended. The Discharger shall be subject to enforcement actions, penalties, and fines as provided in the Clean Water Act (33 USC 1351 et seq.), as amended. The Discharger shall implement and enforce its Approved Pretreatment Program or modified Pretreatment Program as directed by the Regional Water Board's Executive Officer or the EPA. The EPA and/or the State may initiate enforcement action against an industrial user for noncompliance with applicable standards and requirements as provided in the Clean Water Act.

2. The Discharger shall enforce the requirements promulgated under Sections 307(b), 307(c), 307(d) and 402(b) of the Clean Water Act. The Discharger shall cause industrial users subject to Federal Categorical Standards to achieve compliance no later than the date specified in those requirements or, in the case of a new industrial user, upon commencement of the discharge.

3. The Discharger shall perform the pretreatment functions as required in 40 CFR §403 and amendments or modifications thereto including, but not limited to:

   i) Implement the necessary legal authorities to fully implement the pretreatment regulations as provided in 40 CFR §403.8(f)(1);

   ii) Implement the programmatic functions as provided in 40 CFR §403.8(f)(2);

   iii) Publish an annual list of industrial users in significant noncompliance as provided per 40 CFR §403.8(f)(2)(vii);

   iv) Provide for the requisite funding and personnel to implement the pretreatment program as provided in 40 CFR §403.8(f)(3); and

   v) Enforce the national pretreatment standards for prohibited discharges and categorical standards as provided in 40 CFR §§403.5 and 403.6, respectively.

4. The Discharger shall submit annually a report to the EPA Region 9, the State Water Board and the Regional Water Board describing its pretreatment program activities over the previous twelve months. In the event that the Discharger is not in compliance with any conditions or requirements of the Pretreatment Program, the Discharger shall also include the reasons for noncompliance and a plan and schedule for achieving compliance. The report shall contain, but is not limited to, the information specified in Appendix A entitled, "Requirements for Pretreatment Annual Reports," which is made a part of this Order. The annual report is due on the last day of February each year.

5. The Discharger shall submit semiannual pretreatment reports to the EPA Region 9, the State Water Board and the Regional Water Board describing the status of its significant industrial users (SIUs). The report shall contain, but is not limited to, the information specified in Appendix B entitled, "Requirements for Semiannual Pretreatment Reports," which is made

part of this Order. The semiannual reports are due July 31st (for the period January through June) and January 31st (for the period July through December) of each year. The Executive Officer may exempt a Discharger from the semiannual reporting requirements on a case by case basis subject to State Water Board and EPA's comment and approval.

6. The Discharger may combine the annual pretreatment report with the semiannual pretreatment report (for the July through December reporting period). The combined report shall contain all of the information requested in Appendices A and B and will be due on January 31st of each year.

7. The Discharger shall conduct the monitoring of its treatment plant's influent, effluent, and sludge as described in Appendix C entitled, "Requirements for Influent, Effluent and Sludge Monitoring," which is made part of this Order. The results of the sampling and analysis, along with a discussion of any trends, shall be submitted in the semiannual reports. A tabulation of the data shall be included in the annual pretreatment report. The Executive Officer may require more or less frequent monitoring on a case by case basis.

APPENDIX A
REQUIREMENTS FOR PRETREATMENT ANNUAL REPORTS

The Pretreatment Annual Report is due each year on the last day of February. [If the annual report is combined with the semiannual report (for the July through December period) the submittal deadline is January 31st of each year.] The purpose of the Annual Report is 1) to describe the status of the Publicly Owned Treatment Works (POTW) pretreatment program and 2) to report on the effectiveness of the program, as determined by comparing the results of the preceding year's program implementation. The report shall contain at a minimum, but is not limited to, the following information:

1) **Cover Sheet**

The cover sheet must contain the name(s) and National Pollutant Discharge Elimination Discharge System (NPDES) permit number(s) of those POTWs that are part of the Pretreatment Program. Additionally, the cover sheet must include the name, address and telephone number of a pretreatment contact person; the period covered in the report; a statement of truthfulness; and the dated signature of a principal executive officer, ranking elected official, or other duly authorized employee who is responsible for overall operation of the POTW (40 CFR §403.12(j)).

2) **Introduction**

The Introduction shall include any pertinent background information related to the Discharger, the POTW and/or the industrial user base of the area. Also, this section shall include an update on the status of any Pretreatment Compliance Inspection (PCI) tasks, Pretreatment Performance Evaluation tasks, Pretreatment Compliance Audit (PCA) tasks, Cleanup and Abatement Order (CAO) tasks, or other pretreatment-related enforcement actions required by the Regional Water Board or the EPA. A more specific discussion shall be included in the section entitled, "Program Changes."

3) **Definitions**

This section shall contain a list of key terms and their definitions that the Discharger uses to describe or characterize elements of its pretreatment program.

4) **Discussion of Upset, Interference and Pass Through**

This section shall include a discussion of Upset, Interference or Pass Through incidents, if any, at the POTW(s) that the Discharger knows of or suspects were caused by industrial discharges. Each incident shall be described, at a minimum, consisting of the following information:

a) a description of what occurred;

b) a description of what was done to identify the source;

c) the name and address of the industrial user (IU) responsible

d) the reason(s) why the incident occurred;

e) a description of the corrective actions taken; and

f) an examination of the local and federal discharge limits and requirements for the purposes of determining whether any additional limits or changes to existing requirements may be necessary to prevent other Upset, Interference or Pass Through incidents.

5) **Influent, Effluent and Sludge Monitoring Results**

This section shall provide a summary of the analytical results from the "Influent, Effluent and Sludge Monitoring" as specified in Appendix C. The results should be reported in a summary matrix that lists monthly influent and effluent metal results for the reporting year.

A graphical representation of the influent and effluent metal monitoring data for the past five years shall also be provided with a discussion of any trends.

6) **Inspection and Sampling Program**

This section shall contain at a minimum, but is not limited to, the following information:

a) Inspections: the number of inspections performed for each type of IU; the criteria for determining the frequency of inspections; the inspection format procedures;

b) Sampling Events: the number of sampling events performed for each type of IU; the criteria for determining the frequency of sampling; the chain of custody procedures.

7) **Enforcement Procedures**

This section shall provide information as to when the approved Enforcement Response Plan (ERP) had been formally adopted or last revised. In addition, the date the finalized ERP was submitted to the Regional Water Board shall also be given.

8) **Federal Categories**

This section shall contain a list of all of the federal categories that apply to the Discharger. The specific category shall be listed including the subpart and 40 CFR section that applies. The maximum and average limits for the each category shall be provided. This list shall indicate the number of Categorical Industrial Users (CIUs) per category and the CIUs that are being regulated pursuant to the category. The information and data used to determine the limits for those CIUs for which a combined waste stream formula is applied shall also be provided.

9) **Local Standards**

This section shall include a table presenting the local limits.

10) **Updated List of Regulated SIUs**

This section shall contain a complete and updated list of the Discharger's Significant Industrial Users (SIUs), including their names, addresses, and a brief description of the individual SIU's type of business. The list shall include all deletions and additions keyed to the list as submitted in the previous annual report. All deletions shall be briefly explained.

11) **Compliance Activities**

a) **Inspection and Sampling Summary:** This section shall contain a summary of all the inspections and sampling activities conducted by the Discharger over the past year to gather information and data regarding the SIUs. The summary shall include:

(1) the number of inspections and sampling events conducted for each SIU;

(2) the quarters in which these activities were conducted; and

(3) the compliance status of each SIU, delineated by quarter, and characterized using all applicable descriptions as given below:

(a) in consistent compliance;

(b) in inconsistent compliance;

(c) in significant noncompliance;

(d) on a compliance schedule to achieve compliance, (include the date final compliance is required);

(e) not in compliance and not on a compliance schedule;

(f) compliance status unknown, and why not.

b) **Enforcement Summary:** This section shall contain a summary of the compliance and enforcement activities during the past year. The summary shall include the names of all the SIUs affected by the following actions:

(1) Warning letters or notices of violations regarding SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or requirements, or local limits and/or requirements. For each notice, indicate whether it was for an infraction of a federal or local standard/limit or requirement.

(2) Administrative Orders regarding the SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or

requirements, or local limits and/or requirements. For each notice, indicate whether it was for an infraction of a federal or local standard/limit or requirement.

(3) Civil actions regarding the SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or requirements, or local limits and/or requirements. For each notice, indicate whether it was for an infraction of a federal or local standard/limit or requirement.

(4) Criminal actions regarding the SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or requirements, or local limits and/or requirements. For each notice, indicate whether it was for an infraction of a federal or local standard/limit or requirement.

(5) Assessment of monetary penalties. Identify the amount of penalty in each case and reason for assessing the penalty.

(6) Order to restrict/suspend discharge to the POTW.

(7) Order to disconnect the discharge from entering the POTW.

12) **Baseline Monitoring Report Update**

This section shall provide a list of CIUs that have been added to the pretreatment program since the last annual report. This list of new CIUs shall summarize the status of the respective Baseline Monitoring Reports (BMR). The BMR must contain all of the information specified in 40 CFR §403.12(b). For each of the new CIUs, the summary shall indicate when the BMR was due; when the CIU was notified by the POTW of this requirement; when the CIU submitted the report; and/or when the report is due.

13) **Pretreatment Program Changes**

This section shall contain a description of any significant changes in the Pretreatment Program during the past year including, but not limited to, legal authority, local limits, monitoring/ inspection program and frequency, enforcement protocol, program's administrative structure, staffing level, resource requirements and funding mechanism. If the manager of the pretreatment program changes, a revised organizational chart shall be included. If any element(s) of the program is in the process of being modified, this intention shall also be indicated.

14) **Pretreatment Program Budget**

This section shall present the budget spent on the Pretreatment Program. The budget, either by the calendar or fiscal year, shall show the amounts spent on personnel, equipment, chemical analyses and any other appropriate categories. A brief discussion of the source(s) of funding shall be provided.

15) **Public Participation Summary**

This section shall include a copy of the public notice as required in 40 CFR §403.8(f)(2)(vii). If a notice was not published, the reason shall be stated.

16) **Sludge Storage and Disposal Practice**

This section shall have a description of how the treated sludge is stored and ultimately disposed. The sludge storage area, if one is used, shall be described in detail. Its location, a description of the containment features and the sludge handling procedures shall be included.

17) **PCS Data Entry Form**

The annual report shall include the PCS Data Entry Form. This form shall summarize the enforcement actions taken against SIUs in the past year. This form shall include the following information: the POTW name, NPDES Permit number, period covered by the report, the number of SIUs in significant noncompliance (SNC) that are on a pretreatment compliance schedule, the number of notices of violation and administrative orders issued against SIUs, the number of civil and criminal judicial actions against SIUs, the number of SIUs that have been published as a result of being in SNC, and the number of SIUs from which penalties have been collected.

18) **Other Subjects**

Other information related to the Pretreatment Program that does not fit into one of the above categories should be included in this section.

Signed copies of the reports shall be submitted to the Regional Administrator at U.S. EPA, the State Water Board and the Regional Water Board at the following addresses:

Regional Administrator
United States Environmental Protection Agency
Region 9, Mail Code: WTR-7
Clean Water Act Compliance Office
Water Division
75 Hawthorne Street
San Francisco, CA 94105

Pretreatment Program Manager
Regulatory Unit
State Water Resources Control Board
Division of Water Quality
1001 I Street
Sacramento, CA 95814

Pretreatment Coordinator
NPDES Permits Division
SF Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

APPENDIX B:
REQUIREMENTS FOR SEMIANNUAL PRETREATMENT REPORTS

The semiannual pretreatment reports are due on July 31st (for pretreatment program activities conducted from January through June) and January 31st (for pretreatment activities conducted from July through December) of each year, unless an exception has been granted by the Regional Water Board's Executive Officer. The semiannual reports shall contain, at a minimum, but is not limited to, the following information:

1) **Influent, Effluent and Sludge Monitoring**

The influent, effluent and sludge monitoring results shall be included in the report. The analytical laboratory report shall also be included, with the QA/QC data validation provided upon request. A description of the sampling procedures and a discussion of the results shall be given. (Please see Appendix C for specific detailed requirements.) The contributing source(s) of the parameters that exceed NPDES limits shall be investigated and discussed. In addition, a brief discussion of the contributing source(s) of all organic compounds identified shall be provided.

The Discharger has the option to submit all monitoring results via an electronic reporting format approved by the Executive Officer. The procedures for submitting the data will be similar to the electronic submittal of the NPDES self-monitoring reports as outlined in the December 17, 1999 Regional Water Board letter, Official Implementation of Electronic Reporting System (ERS). The Discharger shall contact the Regional Water Board's ERS Project Manager for specific details in submitting the monitoring data.

If the monitoring results are submitted electronically, the analytical laboratory reports (along with the QA/QC data validation) should be kept at the discharger's facility.

2) **Industrial User Compliance Status**

This section shall contain a list of all Significant Industrial Users (SIUs) that were not in consistent compliance with all pretreatment standards/limits or requirements for the reporting period. The compliance status for the previous reporting period shall also be included. Once the SIU has determined to be out of compliance, the SIU shall be included in the report until consistent compliance has been achieved. A brief description detailing the actions that the SIU undertook to come back into compliance shall be provided.

For each SIU on the list, the following information shall be provided:

a. Indicate if the SIU is subject to Federal categorical standards; if so, specify the category including the subpart that applies.

b. For SIUs subject to Federal Categorical Standards, indicate if the violation is of a categorical or local standard.

c. Indicate the compliance status of the SIU for the two quarters of the reporting period.

d. For violations/noncompliance occurring in the reporting period, provide (1) the date(s) of violation(s); (2) the parameters and corresponding concentrations

exceeding the limits and the discharge limits for these parameters and (3) a brief summary of the noncompliant event(s) and the steps that are being taken to achieve compliance.

3) **POTW's Compliance with Pretreatment Program Requirements**

This section shall contain a discussion of the Discharger's compliance status with the Pretreatment Program Requirements as indicated in the latest Pretreatment Compliance Audit (PCA) Report, Pretreatment Compliance Inspection (PCI) Report or Pretreatment Performance Evaluation (PPE) Report. It shall contain a summary of the following information:

a. Date of latest PCA, PCI or PPE and report.

b. Date of the Discharger's response.

c. List of unresolved issues.

d. Plan and schedule for resolving the remaining issues.

The reports shall be signed by a principal executive officer, ranking elected official, or other duly authorized employee who is responsible for the overall operation of the Publicly Owned Treatment Works (POTW) (40 CFR §403.12(j)). Signed copies of the reports shall be submitted to the Regional Administrator at U.S. EPA, the State Water Resources Control Board and the Regional Water Board at the following addresses:

Regional Administrator
United States Environmental Protection Agency
Region 9, Mail Code: WTR-7
Clean Water Act Compliance Office
Water Division
75 Hawthorne Street
San Francisco, CA 94105

Pretreatment Program Manager
Regulatory Unit
State Water Resources Control Board
Division of Water Quality
1001 I Street
Sacramento, CA 95814

Pretreatment Coordinator
NPDES Permits Division
SF Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

APPENDIX C
REQUIREMENTS FOR INFLUENT, EFFLUENT AND SLUDGE MONITORING

The Discharger shall conduct sampling of its treatment plant's influent, effluent and sludge at the frequency as shown in Table 2 on Page 5 of the Self-Monitoring Program (SMP).
The monitoring and reporting requirements of the POTW's Pretreatment Program are in addition to those specified in Table 1 of the SMP. Any subsequent modifications of the requirements specified in Table 1 shall be adhered to and shall not affect the requirements described in this Appendix unless written notice from the Regional Water Board is received. When sampling periods coincide, one set of test results, reported separately, may be used for those parameters that are required to be monitored by both Table 1 and the Pretreatment Program. The Pretreatment Program monitoring reports shall be sent to the Pretreatment Program Coordinator.

1. Influent and Effluent Monitoring

The Discharger shall monitor for the parameters using the required test methods listed in Table 3 on page 5 of the SMP. Any test method substitutions must have received prior written Regional Water Board approval. Influent and effluent sampling locations shall be the same as those sites specified in the Self-Monitoring Program.

The influent and effluent sampled should be taken during the same 24-hour period. All samples must be representative of daily operations. A grab sample shall be used for volatile organic compounds, cyanide and phenol. In addition, any samples for oil and grease, polychlorinated biphenyls, dioxins/furans, and polynuclear aromatic hydrocarbons shall be grab samples. For all other pollutants, 24-hour composite samples must be obtained through flow-proportioned composite sampling. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR §136 and amendments thereto. For effluent monitoring, the reporting limits for the individual parameters shall be at or below the minimum levels (MLs) as stated in the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (2000) [also known as the State Implementation Policy (SIP)]; any revisions to the MLs shall be adhered to. If a parameter does not have a stated minimum level, then the Discharger shall conduct the analysis using the lowest commercially available and reasonably achievable detection levels.

The following standardized report format should be used for submittal of the influent and effluent monitoring report. A similar structured format may be used but will be subject to Regional Water Board approval. The monitoring reports shall be submitted with the Semiannual Reports.

A. Sampling Procedures – This section shall include a brief discussion of the sample locations, collection times, how the sample was collected (i.e., direct collection using vials or bottles, or other types of collection using devices such as automatic samplers, buckets, or beakers), types of containers used, storage procedures and holding times. Include description of prechlorination and chlorination/dechlorination practices during the sampling periods.

B. Method of Sampling Dechlorination – A brief description of the sample dechlorination method prior to analysis shall be provided.

C. Sample Compositing – The manner in which samples are composited shall be described. If the compositing procedure is different from the test method specifications, a reason for the variation shall be provided.

D. Data Validation – All quality assurance/quality control (QA/QC) methods to be used shall be discussed and summarized. These methods include, but are not limited to, spike samples, split samples, blanks and standards. Ways in which the QA/QC data will be used to qualify the analytical test results shall be identified. A certification statement shall be submitted with this discussion stating that the laboratory QA/QC validation data has been reviewed and has met the laboratory acceptance criteria. The QA/QC validation data shall be submitted to the Regional Water Board upon request.

E. A tabulation of the test results shall be provided.

F. Discussion of Results – The report shall include a complete discussion of the test results. If any pollutants are detected in sufficient concentration to upset, interfere or pass through plant operations, the type of pollutant(s) and potential source(s) shall be noted, along with a plan of action to control, eliminate, and/or monitor the pollutant(s). Any apparent generation and/or destruction of pollutants attributable to chlorination/dechlorination sampling and analysis practices shall be noted.

2. **Sludge Monitoring**

Sludge should be sampled in the same 24-hour period during which the influent and effluent are sampled except as noted in (C) below. The same parameters required for influent and effluent analysis shall be included in the sludge analysis. The sludge analyzed shall be a composite sample of the sludge for final disposal consisting of:

A. Sludge lagoons – 20 grab samples collected at representative equidistant intervals (grid pattern) and composited as a single grab, or

B. Dried stockpile – 20 grab samples collected at various representative locations and depths and composited as a single grab, or

C. Dewatered sludge- daily composite of 4 representative grab samples each day for 5 days taken at equal intervals during the daily operating shift taken from a) the dewatering units or b) from each truckload, and shall be combined into a single 5-day composite.

The U.S. EPA manual, POTW Sludge Sampling and Analysis Guidance Document, August 1989, containing detailed sampling protocols specific to sludge is recommended as a guidance for sampling procedures. The U.S. EPA manual Analytical Methods of the National Sewage Sludge Survey, September 1990, containing detailed analytical protocols specific to sludge, is recommended as a guidance for analytical methods.

In determining if the sludge is a hazardous waste, the Dischargers shall adhere to Article 2, "Criteria for Identifying the Characteristics of Hazardous Waste," and Article 3, "Characteristics of Hazardous Waste," of Title 22, California Code of Regulations, Sections 66261.10 to 66261.24 and all amendments thereto.

Sludge monitoring reports shall be submitted with the appropriate Semiannual Report. The following standardized report format should be used for submittal of the report. A similarly structured form may be used but will be subject to Regional Water Board approval.

A. Sampling procedures – Include sample locations, collection procedures, types of containers used, storage/refrigeration methods, compositing techniques and holding times. Enclose a map of sample locations if sludge lagoons or stockpiled sludge is sampled.

B. Data Validation – All quality assurance/quality control (QA/QC) methods to be used shall be discussed and summarized. These methods include, but are not limited to, spike samples, split samples, blanks and standards. Ways in which the QA/QC data will be used to qualify the analytical test results shall be identified. A certification statement shall be submitted with this discussion stating that the laboratory QA/QC validation data has been reviewed and has met the laboratory acceptance criteria. The QA/QC validation data shall be submitted to the Regional Water Board upon request.

C. Test Results – Tabulate the test results and include the percent solids.

D. Discussion of Results – The report shall include a complete discussion of test results. If the detected pollutant(s) is reasonably deemed to have an adverse effect on sludge disposal, a plan of action to control, eliminate, and/or monitor the pollutant(s) and the known or potential source(s) shall be included. Any apparent generation and/or destruction of pollutants attributable to chlorination/ dechlorination sampling and analysis practices shall be noted.

The Discharger shall also provide any influent, effluent or sludge monitoring data for non-priority pollutants that the permittee believes may be causing or contributing to Interference, Pass Through or adversely impacting sludge quality.